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Nata

LumCAT: 4-2222-A
Luminaire: BJB47.319.2030
Report No: NT2017092013
Test No: GC2017092013
LampCAT: SEOUL SAWx22
Lamp flux(lm): 5814.0
Number of Lamps: 1
Length(mm): 100
Phm Type: C
Voltage(V): 52.7000
Current(A): 0.8000
Power (W): 42.1600
PF: 0.0000
Ballast type: DC
Width(mm): 100
Height(mm): 0

Photometric Results

Lumens(lm): 5100.22
Efficiency(%): 87.72%
Lumens(lm)/Power(W): 120.97
Central intensity(cd): 5188.377
Maximum intensity(cd): 5333.864
Angle of maximum intensity: C=0.0 γ =10.0
Beam Angle(50%Imax): [C0/180]Total=63.3
 [C90/270]Total=63.3
Field angle(10%Imax): [C0/180]Total=78.9
 [C90/270]Total=78.9
Maximum s/h(1/2): C0_180=1.06 C90_270=1.06
Maximum s/h(1/4): C0_180=0.92 C90_270=0.92
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.17%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.240%

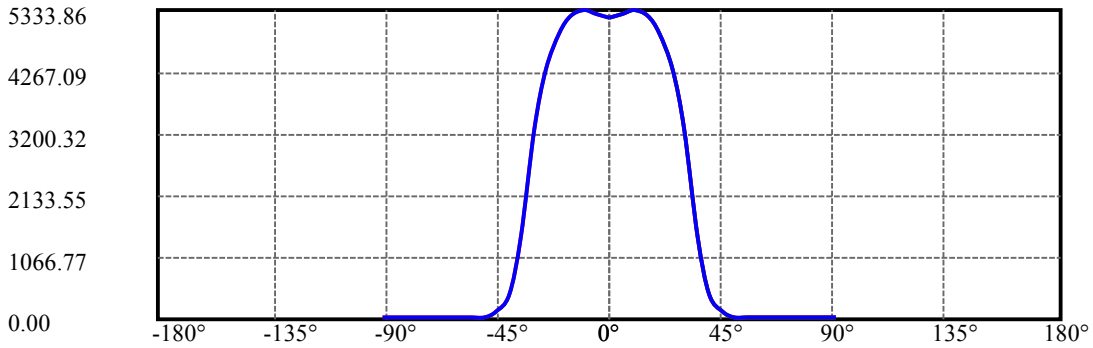
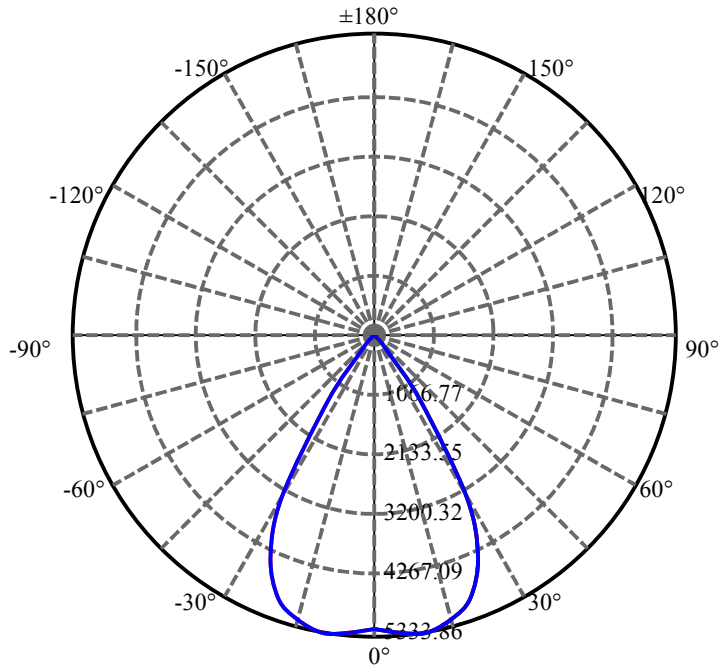
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5188.377	31.028	31.028	.534%	.608%
5.0	5278.326	252.163	283.191	4.337%	5.553%
10.0	5333.864	507.693	790.884	8.732%	15.507%
15.0	5221.962	740.831	1531.716	12.742%	30.032%
20.0	4936.219	925.413	2457.128	15.917%	48.177%
25.0	4303.139	996.835	3453.963	17.145%	67.722%
30.0	3279.572	898.828	4352.791	15.460%	85.345%
35.0	1414.075	444.583	4797.375	7.647%	94.062%
40.0	422.888	148.999	4946.373	2.563%	96.984%
45.0	123.024	47.683	4994.056	.820%	97.918%
50.0	43.914	18.440	5012.496	.317%	98.280%
55.0	27.397	12.302	5024.797	.212%	98.521%
60.0	23.963	11.375	5036.173	.196%	98.744%
65.0	22.773	11.313	5047.486	.195%	98.966%
70.0	22.229	11.450	5058.936	.197%	99.191%
75.0	21.947	11.620	5070.556	.200%	99.418%
80.0	21.899	11.821	5082.377	.203%	99.650%
85.0	21.802	11.905	5094.282	.205%	99.884%
90.0	21.658	5.936	5100.218	.102%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	4352.79	74.87%	85.35%
0-40	4946.37	85.08%	96.98%
0-60	5036.17	86.62%	98.74%
0-90	5094.28	87.62%	99.88%
0-120	5094.28	87.62%	99.88%
0-180	5100.22	87.72%	100.00%
60-90	69.48	1.20%	1.36%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-28.48	4080.17	70.18%	80.00%

ZONAL LUMEN SUMMARY

0-10	790.88
10-20	1666.24
20-30	1895.66
30-40	593.58
40-50	66.12
50-60	23.68
60-70	22.76
70-80	23.44
80-90	11.91
90-100	0.00
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(Max): ———

C0/C180: ———

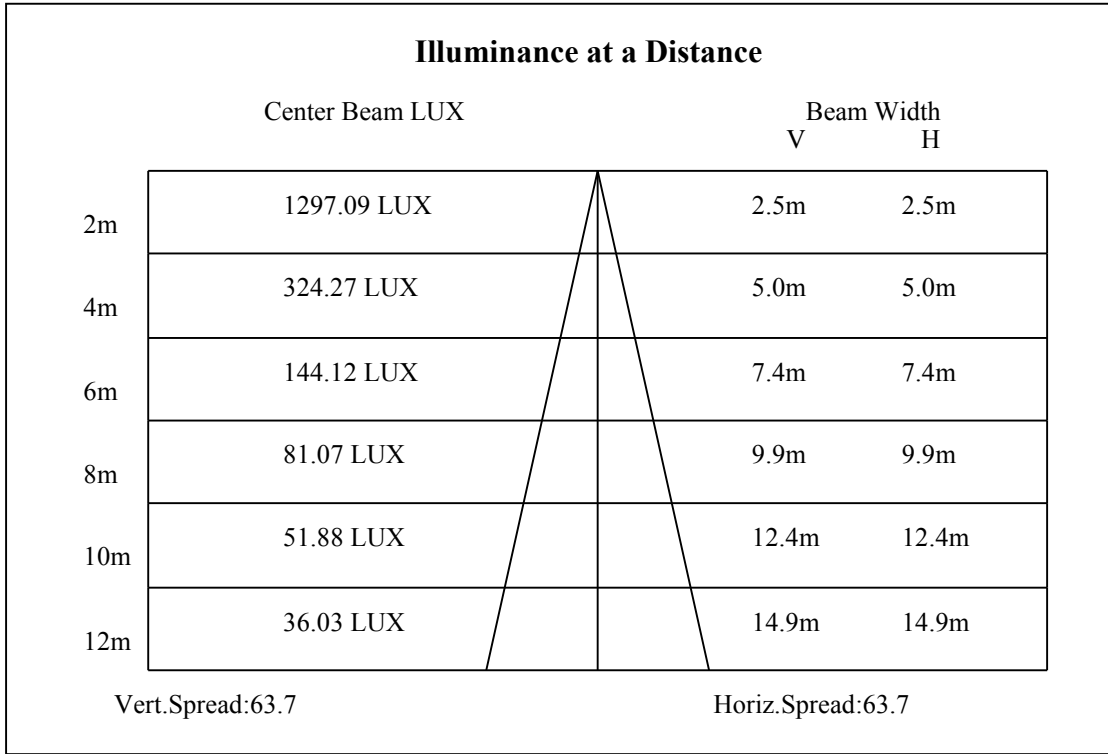
C90/C270: ———

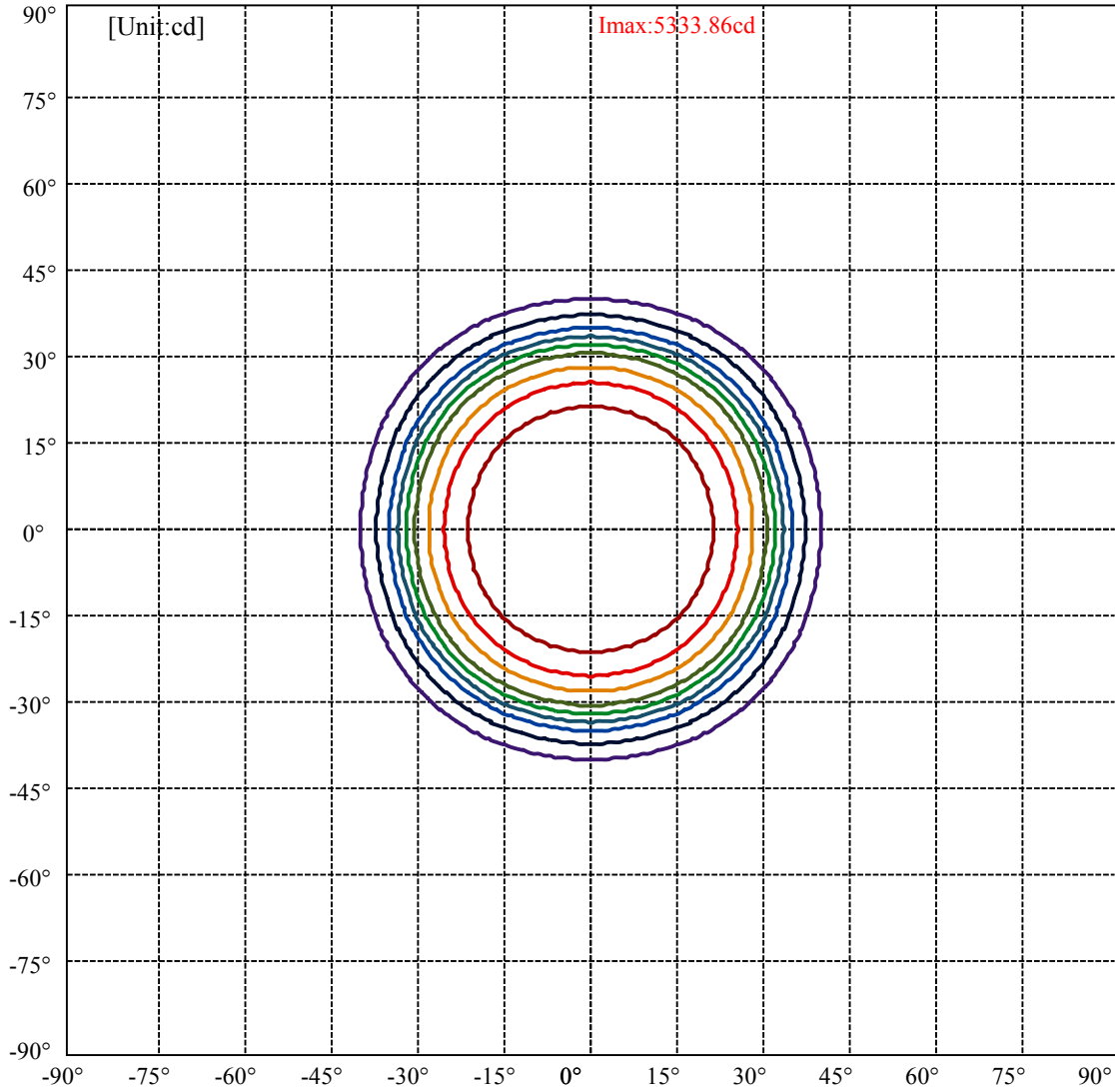
Field angle(10%Imax):C0/180Left:49.4 Right:29.4

:C90/270Left:49.4 Right:29.4

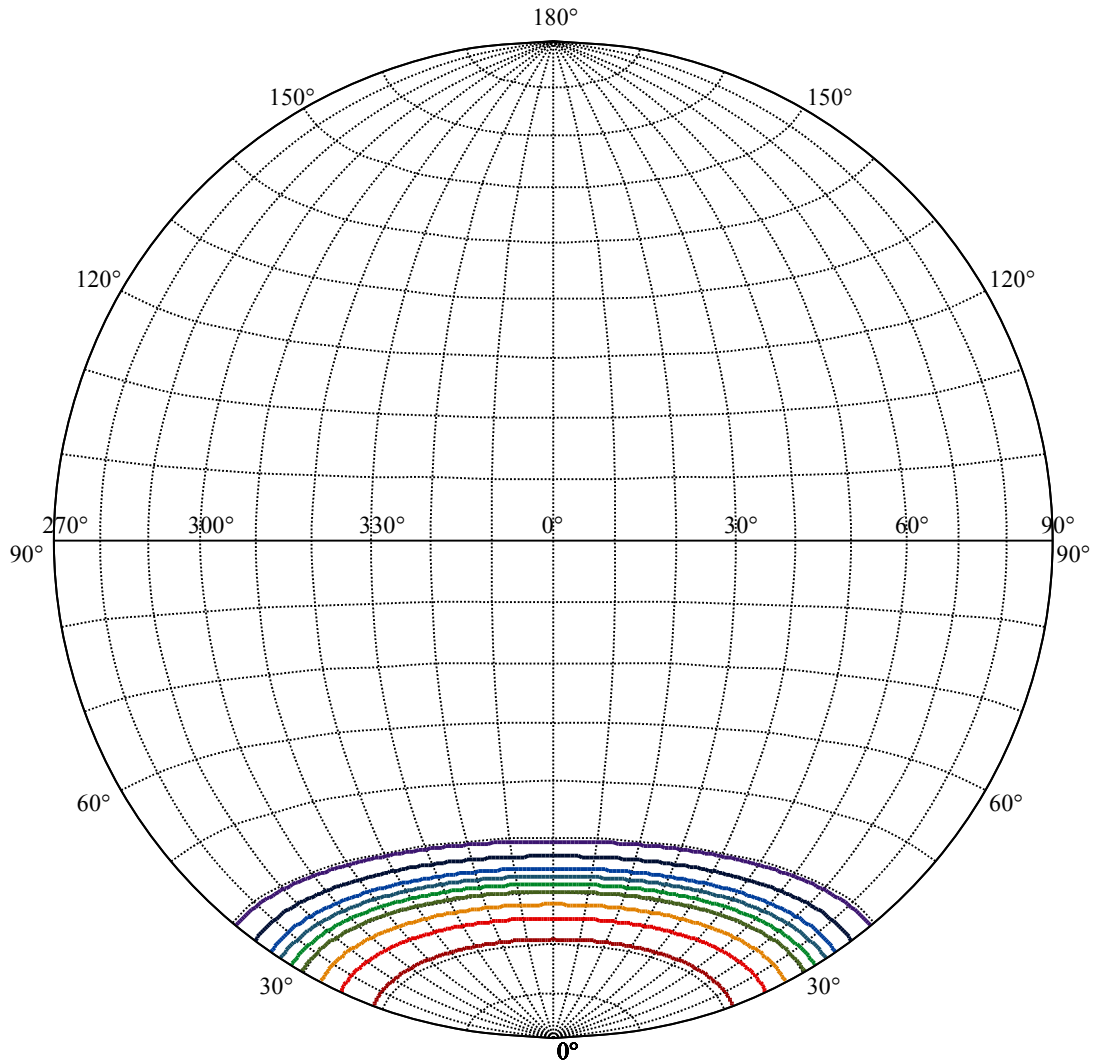
Beam Angle(50%Imax):C0/180Left:41.6 Right:21.6

:C90/270Left:41.6 Right:21.6





(10%Imax) 533.386	—
(20%Imax) 1066.77	—
(30%Imax) 1600.16	—
(40%Imax) 2133.55	—
(50%Imax) 2666.93	—
(60%Imax) 3200.32	—
(70%Imax) 3733.7	—
(80%Imax) 4267.09	—
(90%Imax) 4800.48	—



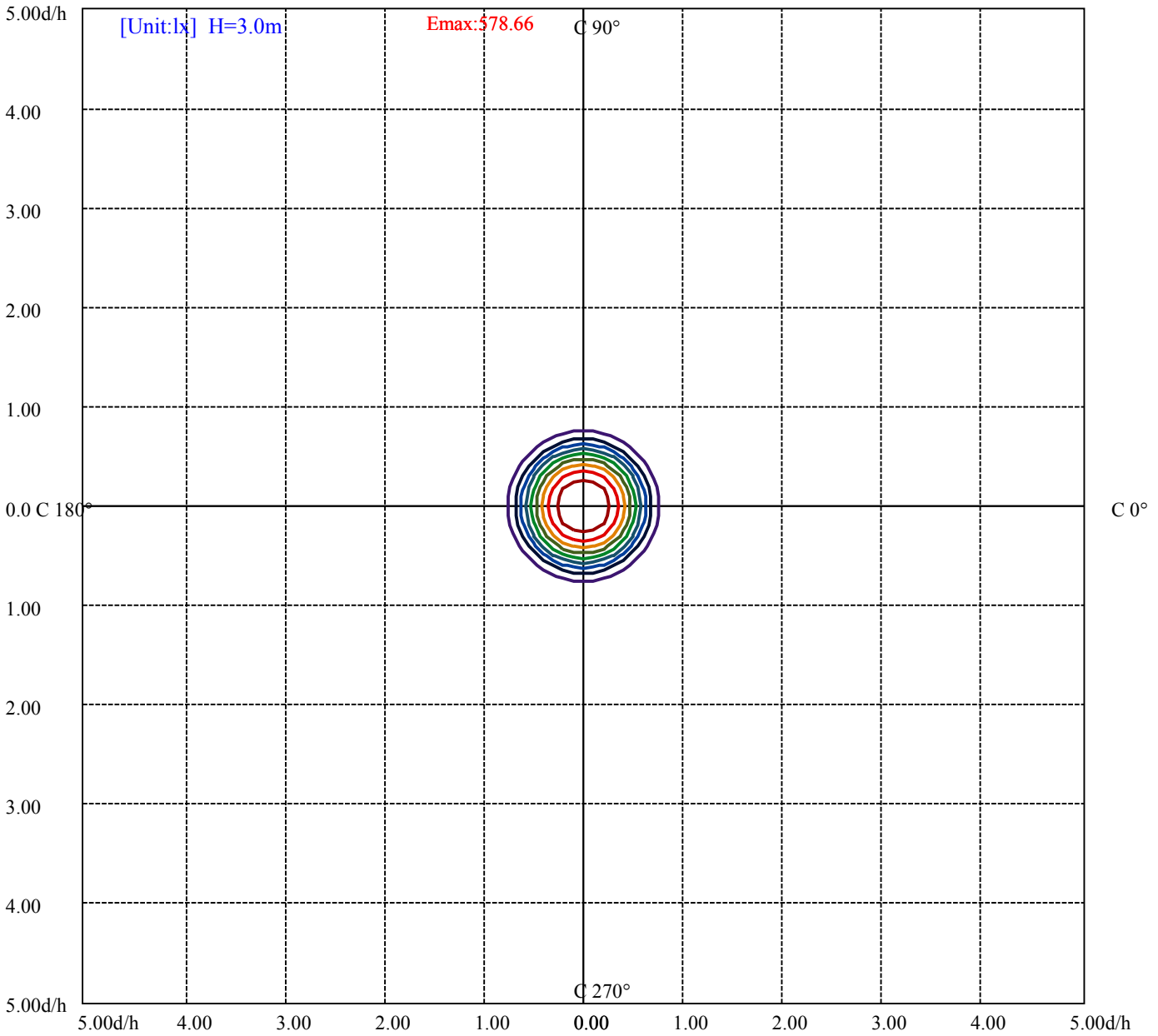
House

[Unit:cd]

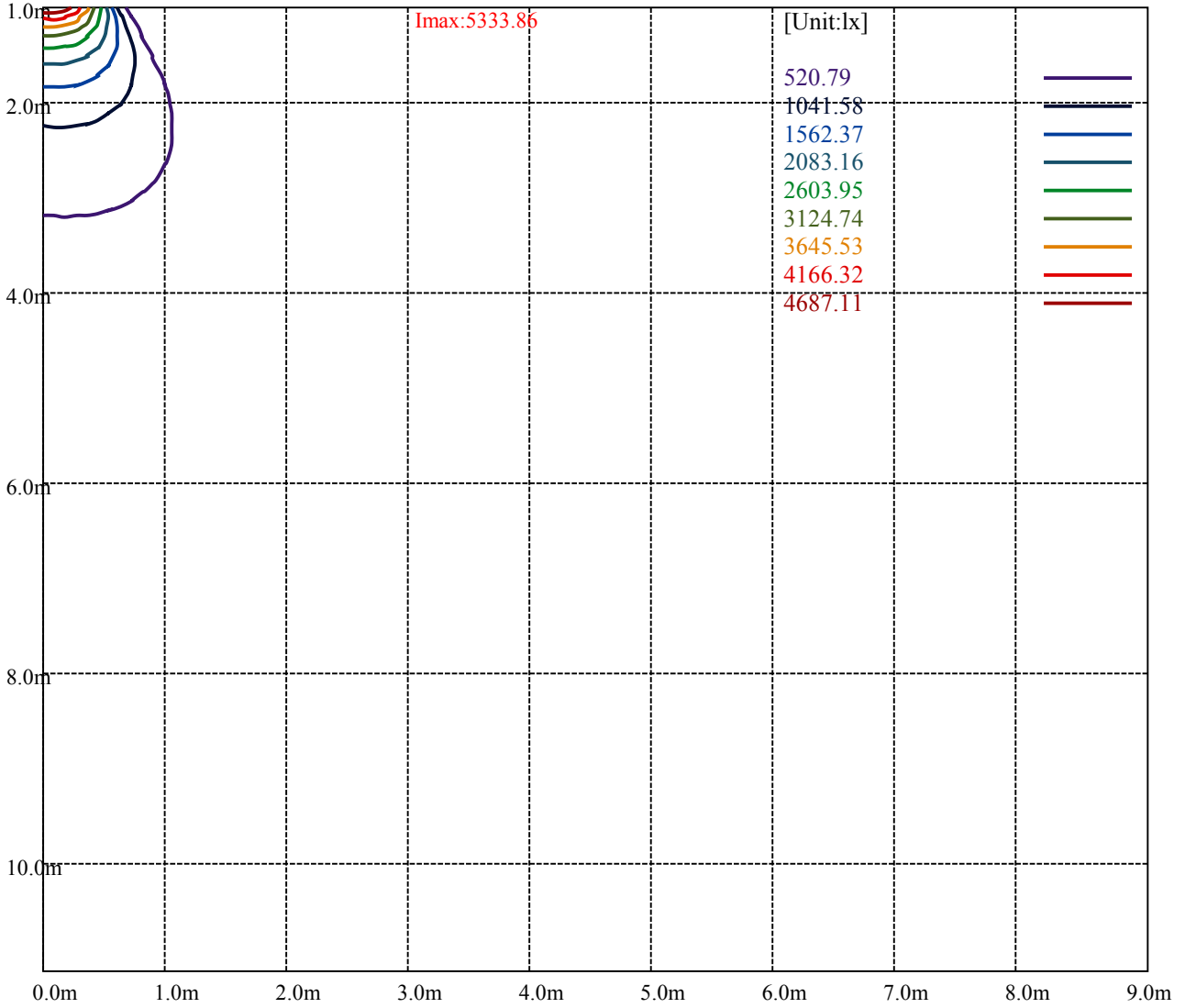
Road

Imax:5333.86

(10%Imax) 533.386	—
(20%Imax) 1066.77	—
(30%Imax) 1600.16	—
(40%Imax) 2133.55	—
(50%Imax) 2666.93	—
(60%Imax) 3200.32	—
(70%Imax) 3733.7	—
(80%Imax) 4267.09	—
(90%Imax) 4800.48	—



(10%Emax) 57.86555	—
(20%Emax) 115.7311	—
(30%Emax) 173.5967	—
(40%Emax) 231.4622	—
(50%Emax) 289.3278	—
(60%Emax) 347.1933	—
(70%Emax) 405.0589	—
(80%Emax) 462.9244	—
(90%Emax) 520.79	—



Luminance Table

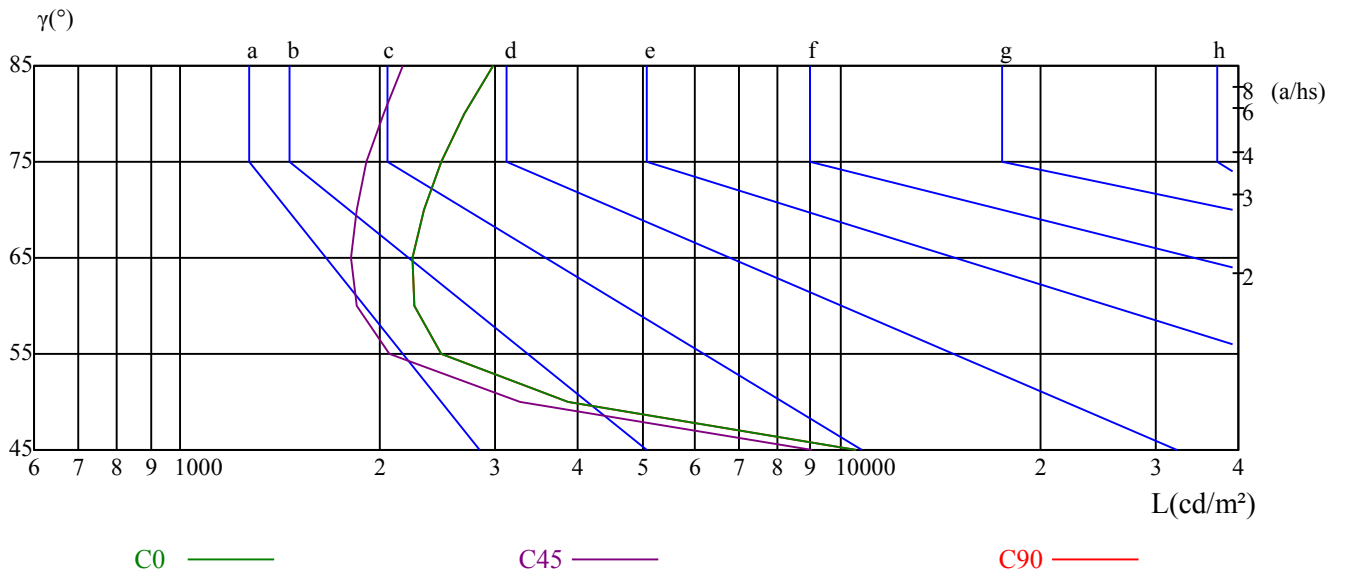
γ	45	50	55	60	65	70	75	80	85
C0	10544	3850	2477	2254	2251	2333	2475	2691	2968
C45	9065	3260	2065	1849	1814	1843	1914	2030	2174
C90	10544	3850	2477	2254	2251	2333	2475	2691	2968

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5388	5388	5388	8480	8480	8480	25015	25015	25015

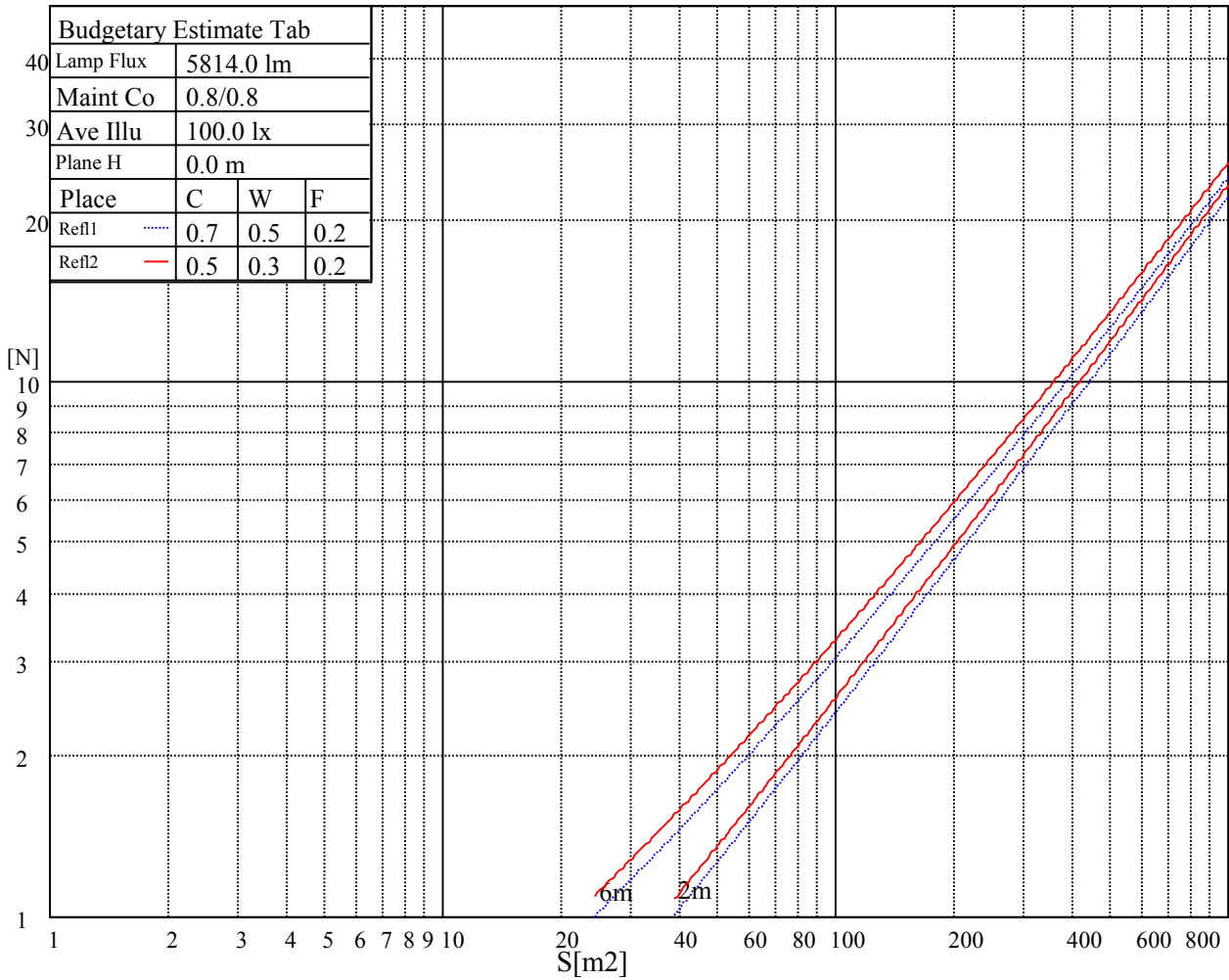
Glare Table

Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
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

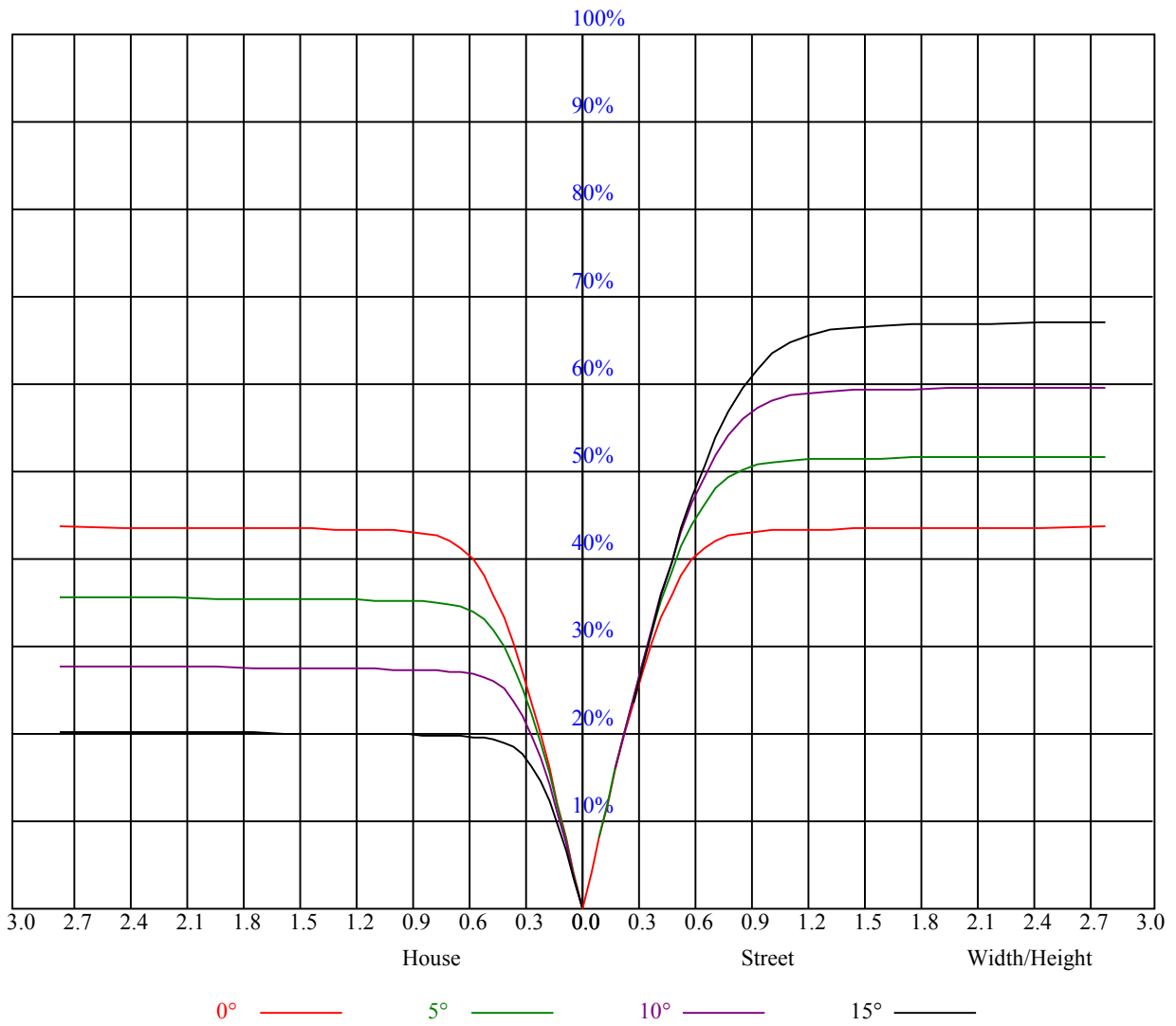
Luminance Limiting Curve



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	-1.32	-0.39	-0.95	-0.08	0.24	-1.38	-0.45	-1.02	-0.14	0.18
	3H	0.68	1.50	1.06	1.84	2.21	0.66	1.48	1.04	1.82	2.19
	4H	1.83	2.60	2.24	2.95	3.34	1.82	2.59	2.23	2.94	3.33
	6H	3.09	3.79	3.51	4.16	4.56	3.09	3.78	3.51	4.16	4.56
	8H	3.73	4.38	4.17	4.78	5.19	3.73	4.38	4.17	4.77	5.19
	12H	4.72	5.35	5.16	5.73	6.16	4.73	5.35	5.16	5.74	6.17
4H	2H	-0.92	-0.16	-0.51	0.19	0.58	-0.97	-0.21	-0.57	0.14	0.53
	3H	1.40	2.02	1.82	2.43	2.84	1.39	2.01	1.80	2.42	2.83
	4H	2.74	3.30	3.18	3.73	4.18	2.74	3.29	3.17	3.72	4.17
	6H	4.12	4.60	4.59	5.05	5.52	4.11	4.59	4.59	5.04	5.52
	8H	4.88	5.32	5.35	5.77	6.25	4.87	5.32	5.35	5.77	6.25
8H	12H	5.87	6.26	6.37	6.75	7.22	5.88	6.26	6.37	6.75	7.23
	4H	3.17	3.61	3.64	4.06	4.54	3.16	3.60	3.64	4.05	4.53
	6H	4.78	5.13	5.29	5.64	6.13	4.78	5.13	5.29	5.64	6.12
	8H	5.70	6.01	6.23	6.53	7.03	5.70	6.01	6.23	6.53	7.03
12H	12H	6.83	7.09	7.35	7.59	8.18	6.83	7.10	7.36	7.60	8.18
	4H	3.25	3.64	3.75	4.13	4.60	3.25	3.63	3.74	4.12	4.60
	6H	5.17	5.27	5.49	5.74	6.29	5.17	5.26	5.49	5.74	6.29
	8H	5.96	6.23	6.49	6.73	7.31	5.96	6.23	6.49	6.73	7.31
Variation with the observer position at spacings:											
S = 1.0H	5.9/-10.4					5.9/-10.4					
S = 1.5H	8.6/-8.6					8.6/-8.6					
S = 2.0H	10.4/-7.5					10.4/-7.5					
Standard tables:	BK1					BK1					
Uncorrected UGR	0.4					0.4					



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	1.05	1.05	1.05	1.03	1.03	1.03	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.95	0.93	0.95	0.93	0.92	0.92	0.90	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.82
2	0.91	0.88	0.85	0.90	0.87	0.84	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.79	0.77
3	0.86	0.82	0.78	0.85	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.75	0.78	0.76	0.74	0.73
4	0.81	0.76	0.73	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.75	0.72	0.70	0.69
5	0.77	0.72	0.68	0.76	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.71	0.69	0.66	0.65
6	0.73	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
7	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.58
8	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.55
9	0.62	0.58	0.54	0.62	0.57	0.54	0.61	0.57	0.54	0.60	0.57	0.54	0.60	0.56	0.54	0.53
10	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.58	0.54	0.51	0.57	0.54	0.51	0.50



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	5187.41	5303.03	5385.62	5271.65	5028.85	4416.07	3408.54	1721.06	516.98
45.0	5184.11	5285.96	5365.80	5274.40	5032.71	4419.38	3423.96	1819.61	524.69
90.0	5190.72	5319.00	5379.01	5276.05	4890.11	4287.24	3199.88	1041.17	380.11
135.0	5191.27	5275.50	5342.12	5247.98	4966.09	4420.48	3497.18	1841.64	504.32
180.0	5187.41	5238.07	5282.11	5125.75	4843.31	4212.92	3113.44	1042.44	342.29
225.0	5184.11	5230.36	5253.48	5129.05	4860.93	4218.42	3089.77	1074.81	323.68
270.0	5190.72	5249.08	5320.10	5241.37	4975.45	4344.50	3441.03	1688.03	446.51
315.0	5191.27	5325.61	5342.67	5209.44	4892.31	4106.11	3062.79	1083.84	344.54
360.0	5187.41	5303.03	5385.62	5271.65	5028.85	4416.07	3408.54	1721.06	516.98
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	150.69	48.56	28.24	24.00	22.63	22.13	21.80	21.80	21.80
45.0	137.86	47.13	26.98	23.84	22.74	22.13	21.80	21.80	21.75
90.0	107.86	38.10	26.21	23.78	22.79	22.19	21.97	21.80	21.75
135.0	121.51	43.71	27.09	24.28	23.23	22.74	22.13	22.30	21.75
180.0	97.06	40.03	26.54	23.78	22.85	22.30	22.02	21.86	21.80
225.0	93.05	37.66	26.65	23.45	22.57	22.02	21.86	21.80	21.80
270.0	140.72	49.99	29.07	24.39	22.74	22.08	21.80	21.75	21.80
315.0	135.44	46.14	28.41	24.17	22.63	22.24	22.19	22.08	21.97
360.0	150.69	48.56	28.24	24.00	22.63	22.13	21.80	21.80	21.80
C/ γ (°)	90.0								
0.0	21.64								
45.0	21.69								
90.0	21.64								
135.0	21.64								
180.0	21.64								
225.0	21.69								
270.0	21.69								
315.0	21.64								
360.0	21.64								