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Nata

LumCAT: 3-1699-N
Luminaire: 92.70.045.00+92.70.089.00
Report No: NT2017101002
Test No: nata-0100
LampCAT: CREE CXA2520
Lamp flux(lm): 2226.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V): 35.7000
Current(A): 0.7000
Power (W): 24.9900
PF: 0.0000
Ballast type: DC
Width(mm): 79
Height(mm): 0

Photometric Results

Lumens(lm): 1764.65
Efficiency(%): 79.27%
Lumens(lm)/Power(W): 72.02
Central intensity(cd): 6175.126
Maximum intensity(cd): 6175.126
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=25.1
 [C90/270]Total=25.1
Field angle(10%Imax): [C0/180]Total=50.1
 [C90/270]Total=50.1
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 80.86%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.089%

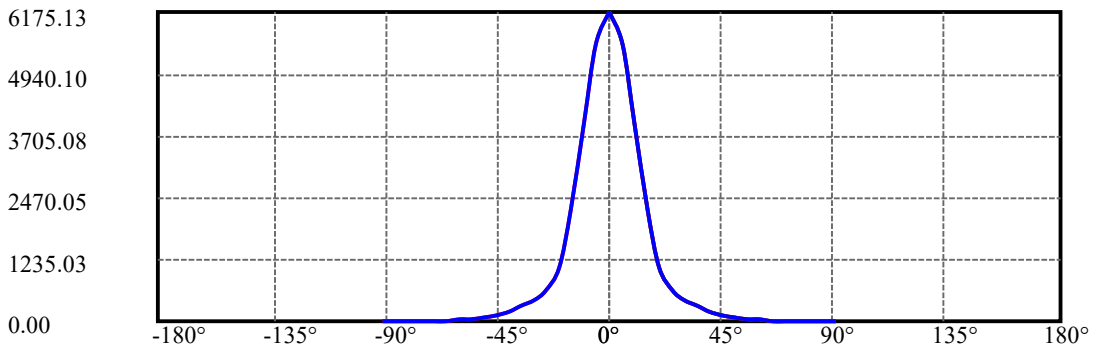
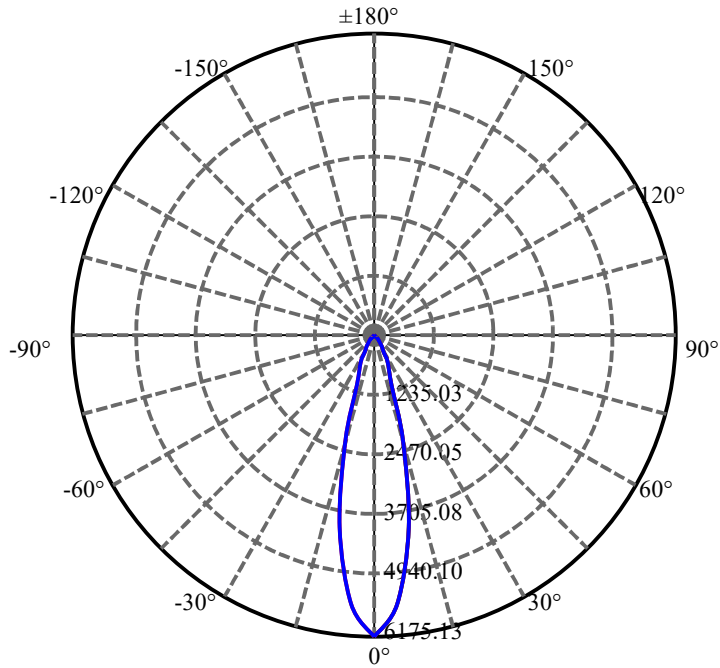
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6175.126	36.928	36.928	1.659%	2.093%
5.0	5517.477	263.588	300.517	11.841%	17.030%
10.0	3979.752	378.805	679.322	17.017%	38.496%
15.0	2232.537	316.726	996.048	14.229%	56.445%
20.0	1088.093	203.989	1200.037	9.164%	68.004%
25.0	619.495	143.508	1343.545	6.447%	76.137%
30.0	424.836	116.434	1459.979	5.231%	82.735%
35.0	294.985	92.743	1552.722	4.166%	87.990%
40.0	204.046	71.893	1624.615	3.230%	92.064%
45.0	121.406	47.056	1671.671	2.114%	94.731%
50.0	71.931	30.204	1701.875	1.357%	96.443%
55.0	39.338	17.663	1719.538	.793%	97.444%
60.0	20.990	9.964	1729.502	.448%	98.008%
65.0	15.973	7.935	1737.437	.356%	98.458%
70.0	14.260	7.345	1744.782	.330%	98.874%
75.0	12.835	6.796	1751.577	.305%	99.259%
80.0	11.094	5.989	1757.566	.269%	99.599%
85.0	9.339	5.100	1762.666	.229%	99.888%
90.0	7.240	1.984	1764.65	.089%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1459.98	65.59%	82.73%
0-40	1624.61	72.98%	92.06%
0-60	1729.50	77.70%	98.01%
0-90	1762.67	79.19%	99.89%
0-120	1762.67	79.19%	99.89%
0-180	1764.65	79.27%	100.00%
60-90	43.13	1.94%	2.44%
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%
0-27.93	1411.72	63.42%	80.00%

ZONAL LUMEN SUMMARY

0-10	679.32
10-20	520.72
20-30	259.94
30-40	164.64
40-50	77.26
50-60	27.63
60-70	15.28
70-80	12.78
80-90	5.10
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: ———

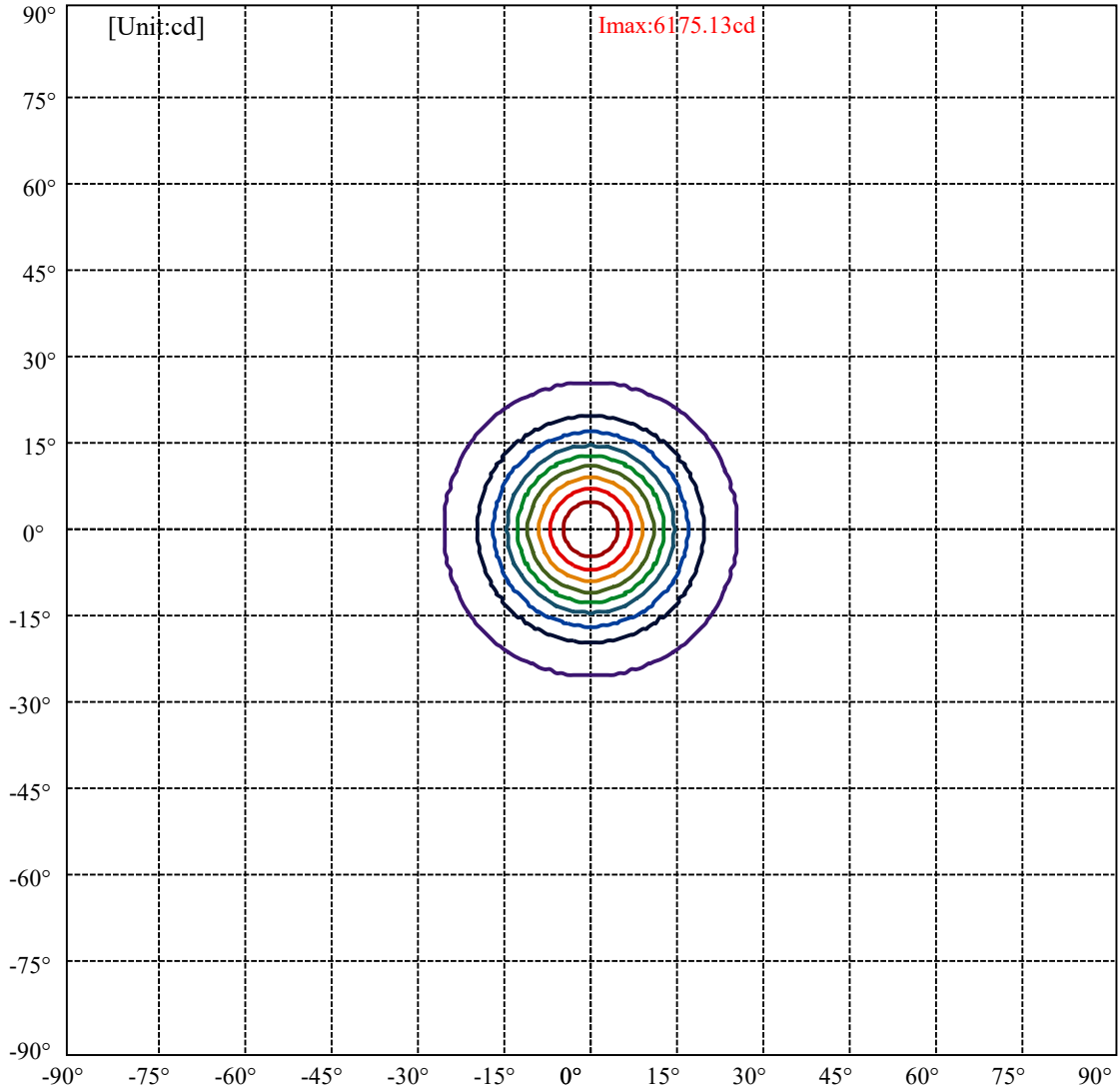
C90/C270: ———

Field angle(10%Imax):C0/180Left:25.1 Right:25.1

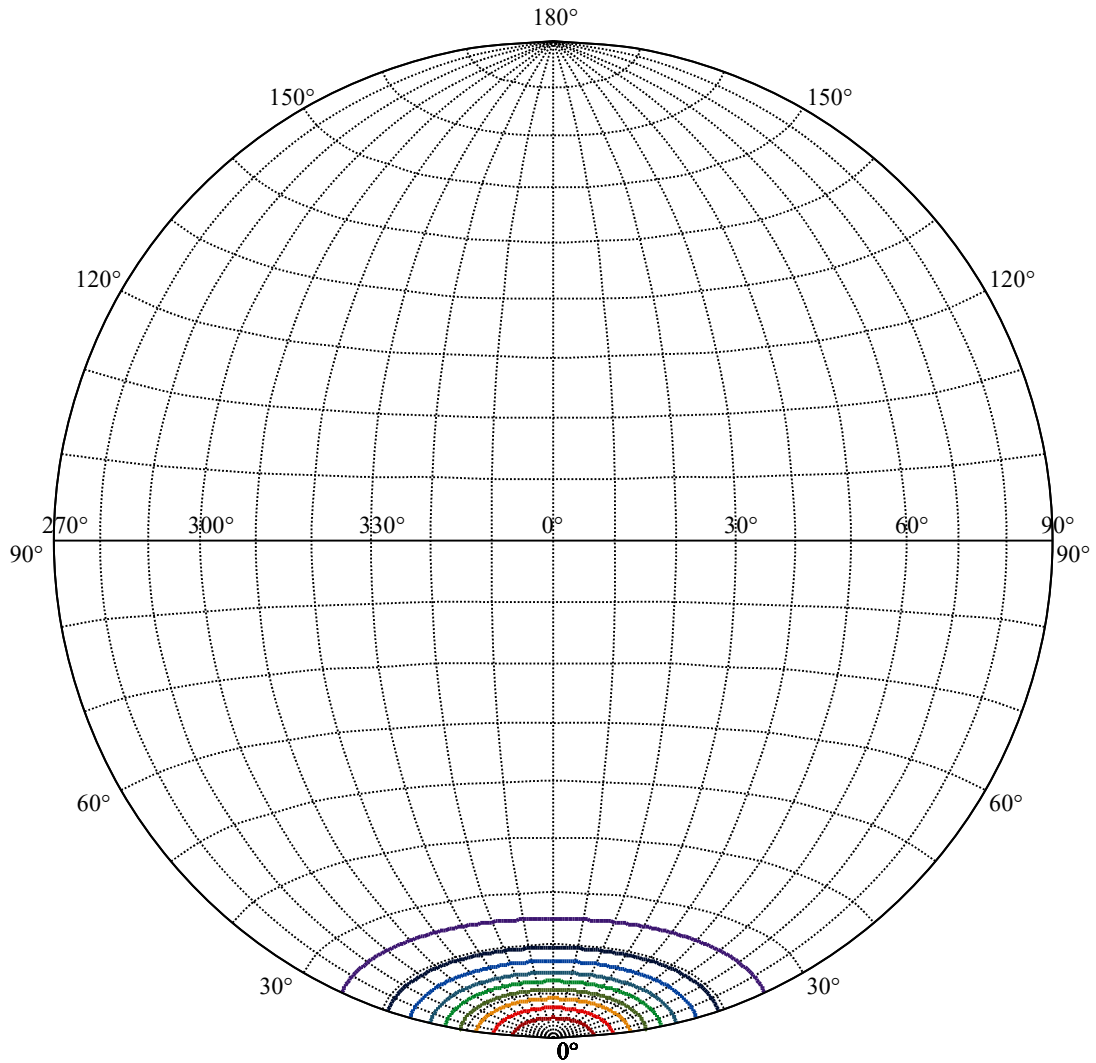
:C90/270Left:25.1 Right:25.1

Beam Angle(50%Imax):C0/180Left:12.6 Right:12.6

:C90/270Left:12.6 Right:12.6



(10%Imax) 617.513	—
(20%Imax) 1235.03	—
(30%Imax) 1852.54	—
(40%Imax) 2470.05	—
(50%Imax) 3087.56	—
(60%Imax) 3705.08	—
(70%Imax) 4322.59	—
(80%Imax) 4940.1	—
(90%Imax) 5557.61	—



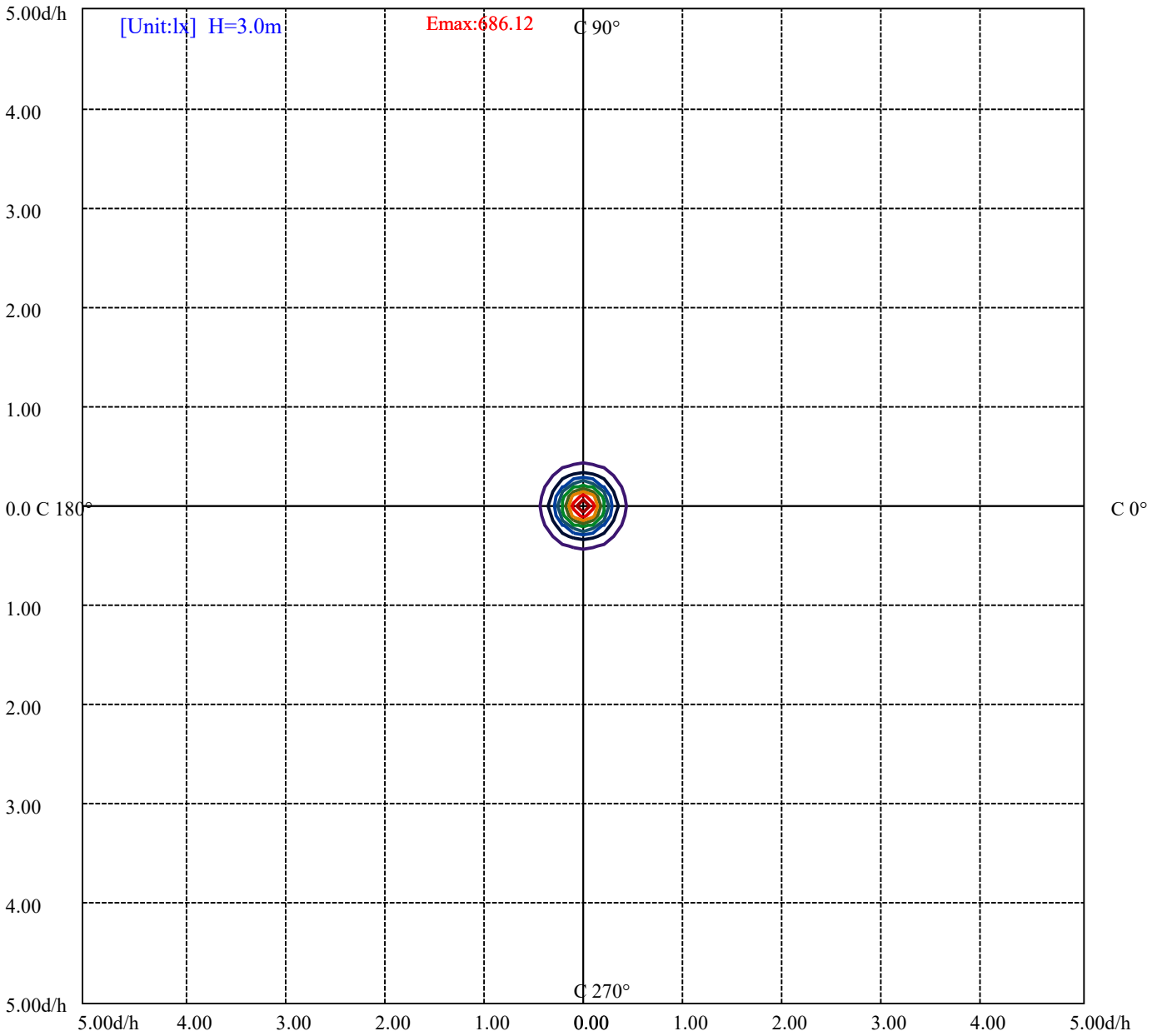
House

[Unit:cd]

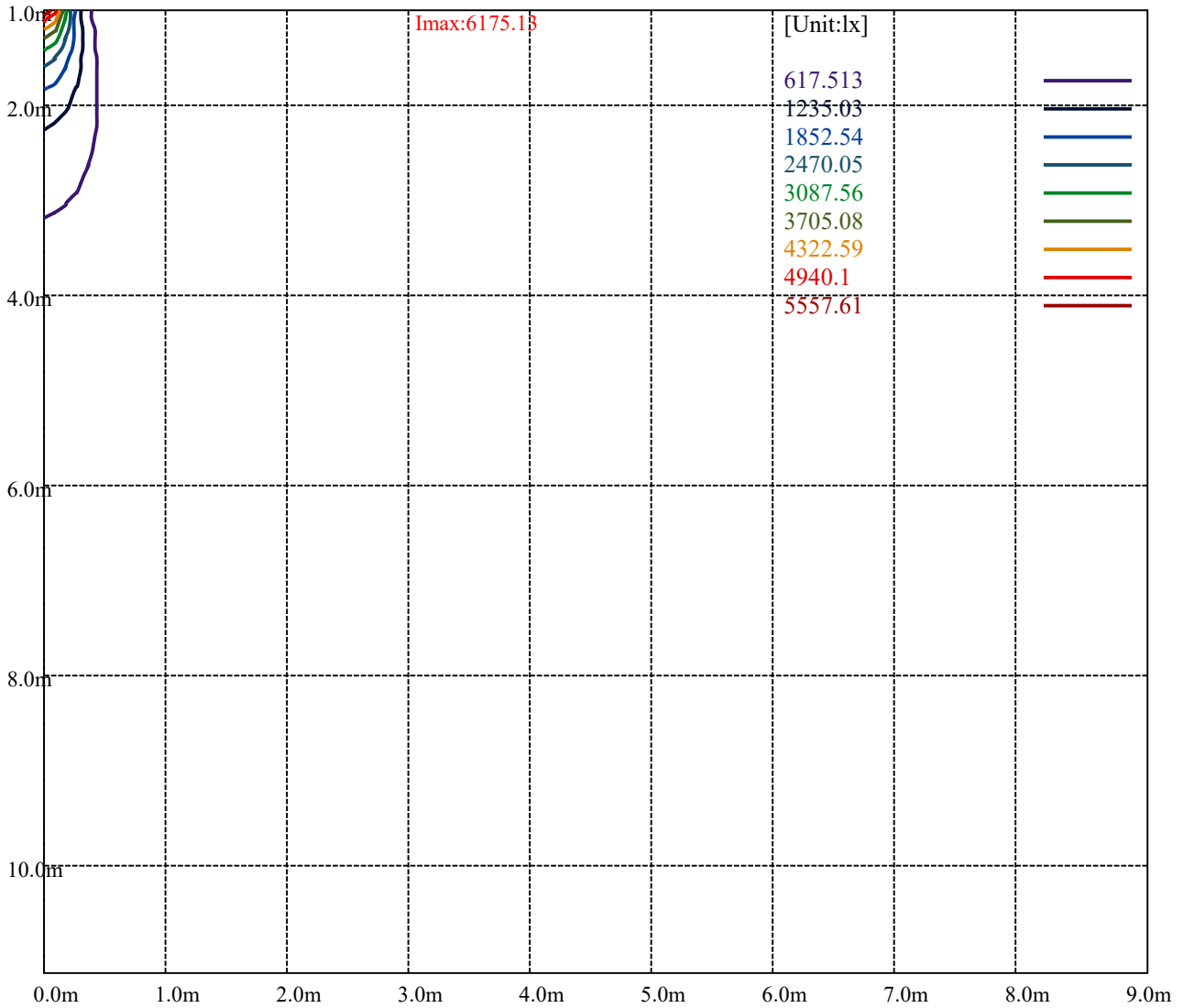
Road

I_{max}:6175.13

(10%I _{max}) 617.513	—
(20%I _{max}) 1235.03	—
(30%I _{max}) 1852.54	—
(40%I _{max}) 2470.05	—
(50%I _{max}) 3087.56	—
(60%I _{max}) 3705.08	—
(70%I _{max}) 4322.59	—
(80%I _{max}) 4940.1	—
(90%I _{max}) 5557.61	—



(10%Emax) 68.61234	—
(20%Emax) 137.2244	—
(30%Emax) 205.8367	—
(40%Emax) 274.4489	—
(50%Emax) 343.0611	—
(60%Emax) 411.6733	—
(70%Emax) 480.2855	—
(80%Emax) 548.8978	—
(90%Emax) 617.5111	—



Luminance Table

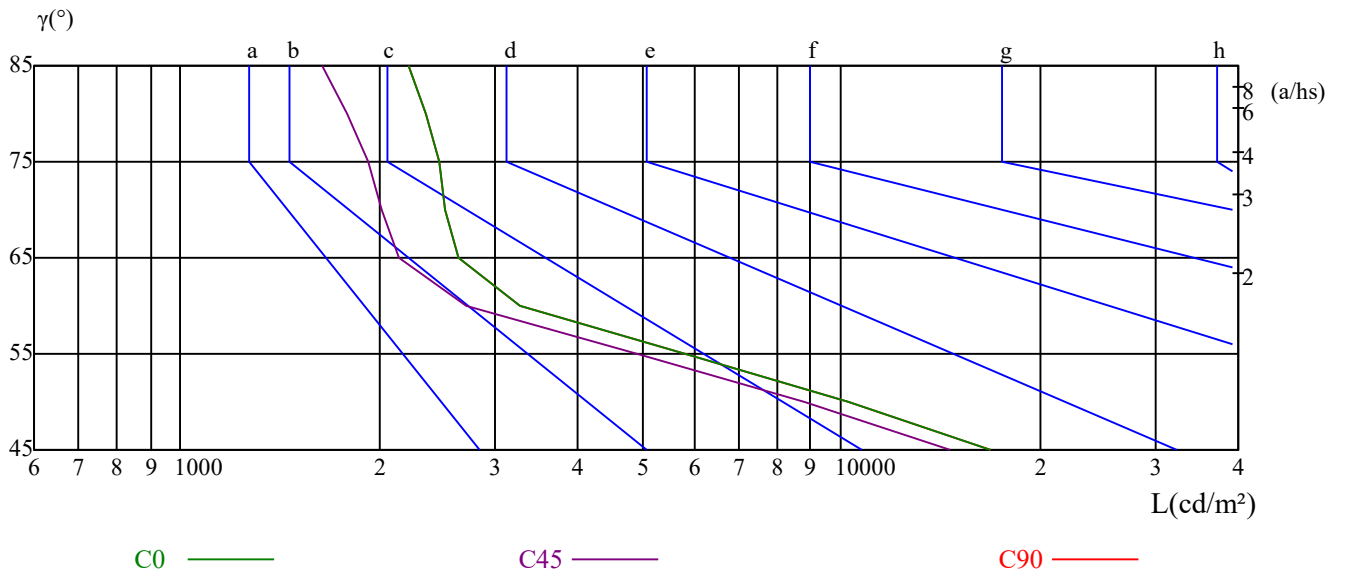
γ	45	50	55	60	65	70	75	80	85
C0	16823	10262	5829	3261	2629	2515	2459	2346	2222
C45	14655	8808	4926	2710	2146	2012	1922	1785	1636
C90	16823	10262	5829	3261	2629	2515	2459	2346	2222

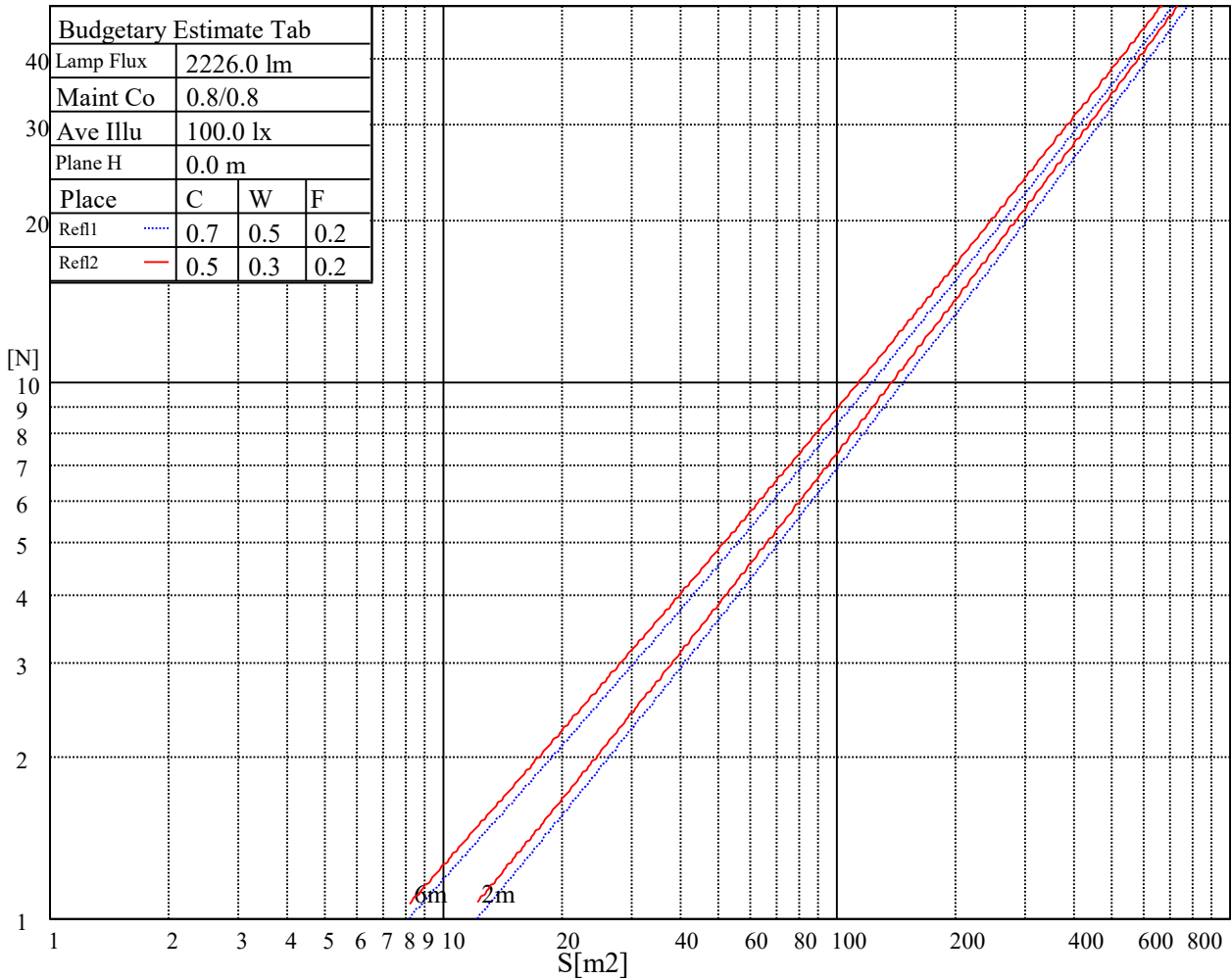
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5761	5761	5761	7558	7558	7558	16332	16332	16332

Glare Table

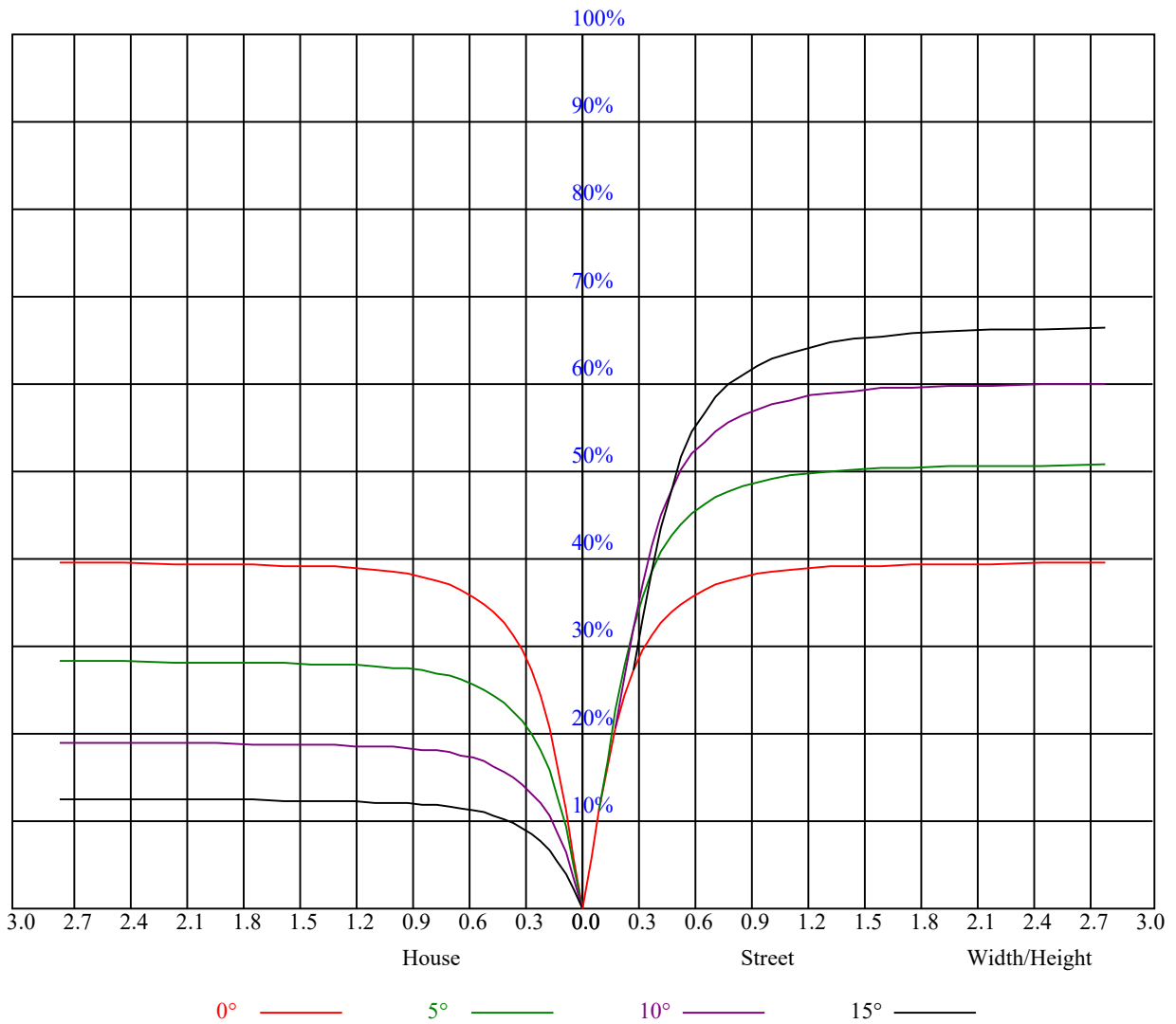
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	0.96	0.96	0.96	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.81
1	0.88	0.86	0.84	0.87	0.84	0.82	0.83	0.82	0.80	0.80	0.79	0.78	0.77	0.76	0.75	0.74
2	0.83	0.80	0.77	0.82	0.79	0.76	0.79	0.77	0.75	0.77	0.75	0.73	0.75	0.73	0.72	0.70
3	0.79	0.75	0.72	0.78	0.74	0.72	0.76	0.73	0.71	0.74	0.71	0.69	0.72	0.70	0.68	0.67
4	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.71	0.68	0.66	0.70	0.67	0.66	0.64
5	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.63	0.67	0.65	0.63	0.62
6	0.69	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.65	0.63	0.61	0.60
7	0.66	0.62	0.60	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.58
8	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.60	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.56
9	0.62	0.58	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.54
10	0.60	0.56	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.53



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	6187.24	5670.81	4188.14	2461.02	1201.88	649.11	436.05	305.56	212.46
45.0	6168.52	5323.95	3698.69	2007.36	984.41	575.34	412.92	286.29	188.13
90.0	6147.05	5223.75	3575.91	1833.93	906.50	537.90	374.82	254.14	170.29
135.0	6197.70	5634.47	4068.12	2361.92	1196.93	643.06	431.09	296.75	205.14
180.0	6187.24	5439.57	3768.06	1998.00	1013.20	593.23	406.37	282.16	196.39
225.0	6168.52	5649.34	4196.40	2369.63	1065.18	660.35	456.64	319.71	227.93
270.0	6147.05	5729.17	4418.28	2601.41	1252.53	688.21	458.07	317.12	225.46
315.0	6197.70	5468.75	3924.42	2227.03	1084.12	608.76	422.72	298.13	206.57
360.0	6187.24	5670.81	4188.14	2461.02	1201.88	649.11	436.05	305.56	212.46

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	126.63	78.40	43.38	22.41	16.46	14.53	13.21	11.84	9.86
45.0	113.03	65.63	34.74	19.27	15.80	14.31	12.83	11.23	9.30
90.0	104.39	61.66	32.81	18.77	15.64	14.26	12.61	10.63	8.81
135.0	122.56	72.84	40.14	21.09	15.75	14.09	12.77	10.85	9.08
180.0	116.72	67.06	38.76	20.04	15.36	13.71	12.28	10.52	9.19
225.0	132.58	77.35	42.78	22.35	16.02	14.09	12.83	11.01	9.52
270.0	136.10	80.82	43.99	24.33	16.74	14.81	13.38	11.45	9.41
315.0	119.25	71.68	38.10	19.66	16.02	14.26	12.77	11.23	9.52
360.0	126.63	78.40	43.38	22.41	16.46	14.53	13.21	11.84	9.86

C/γ(°)	90.0
0.0	7.10
45.0	7.21
90.0	7.21
135.0	7.16
180.0	7.10
225.0	7.60
270.0	7.32
315.0	7.21
360.0	7.10