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Nata

LumCAT: 3-1920-E
Luminaire: 99.02.73.181+92.76.323.00
Report No: GC2017031711 Voltage(V): 36.0000
Test No: NT-0010 Current(A): 0.5000
LampCAT: LUMILEDS LUXEON CoB 1205 Power (W): 18.0000
Lamp flux(lm): 2435.0 PF: 0.0000
Number of Lamps: 1 Ballast type: DC
Length(mm): 76 Width(mm): 76
Phm Type: C Height(mm): 0

Photometric Results

Lumens(lm): 2176.88
Efficiency(%): 89.40%
Lumens(lm)/Power(W): 120.94
Central intensity(cd): 2900.509
Maximum intensity(cd): 2900.509
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=55.9
[C90/270]Total=55.9
Field angle(10%Imax): [C0/180]Total=76.8
[C90/270]Total=76.8
Maximum s/h(1/2): C0_180=0.85 C90_270=0.85
Maximum s/h(1/4): C0_180=0.85 C90_270=0.85
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.40%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.637%

Equipment: gms1980
Temperature(°C): 25.0

Date: 2017/3/17
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.42

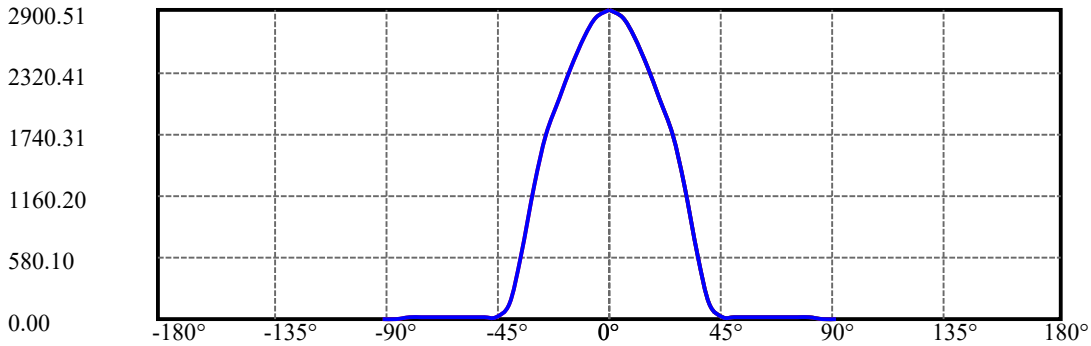
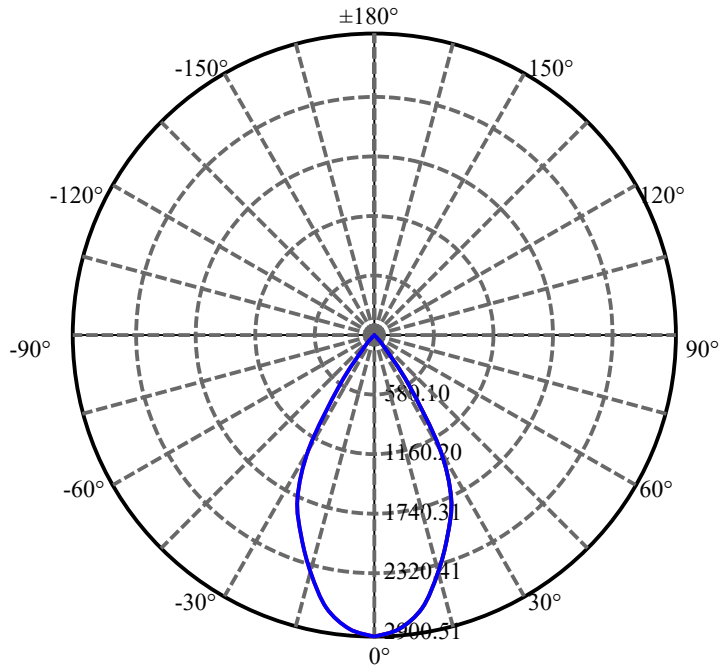
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2900.509	0.000	0	.000%	.000%
5.0	2834.097	68.556	68.556	2.815%	3.149%
10.0	2656.471	196.415	264.97	8.066%	12.172%
15.0	2368.595	298.084	563.054	12.242%	25.865%
20.0	2071.704	365.943	928.997	15.028%	42.676%
25.0	1729.872	398.715	1327.712	16.374%	60.991%
30.0	1252.127	377.374	1705.087	15.498%	78.327%
35.0	590.094	271.280	1976.367	11.141%	90.789%
40.0	147.111	122.997	2099.364	5.051%	96.439%
45.0	19.490	30.847	2130.211	1.267%	97.856%
50.0	13.028	6.571	2136.782	.270%	98.158%
55.0	11.459	5.324	2142.106	.219%	98.403%
60.0	10.598	5.098	2147.205	.209%	98.637%
65.0	10.007	5.009	2152.214	.206%	98.867%
70.0	9.656	4.979	2157.192	.204%	99.096%
75.0	9.415	4.985	2162.177	.205%	99.325%
80.0	9.160	4.970	2167.147	.204%	99.553%
85.0	8.878	4.901	2172.048	.201%	99.778%
90.0	8.775	4.833	2176.882	.198%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1705.09	70.02%	78.33%
0-40	2099.36	86.22%	96.44%
0-60	2147.20	88.18%	98.64%
0-90	2172.05	89.20%	99.78%
0-120	2172.05	89.20%	99.78%
0-180	2176.88	89.40%	100.00%
60-90	29.94	1.23%	1.38%
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%
0-30.67	1741.51	71.52%	80.00%

ZONAL LUMEN SUMMARY

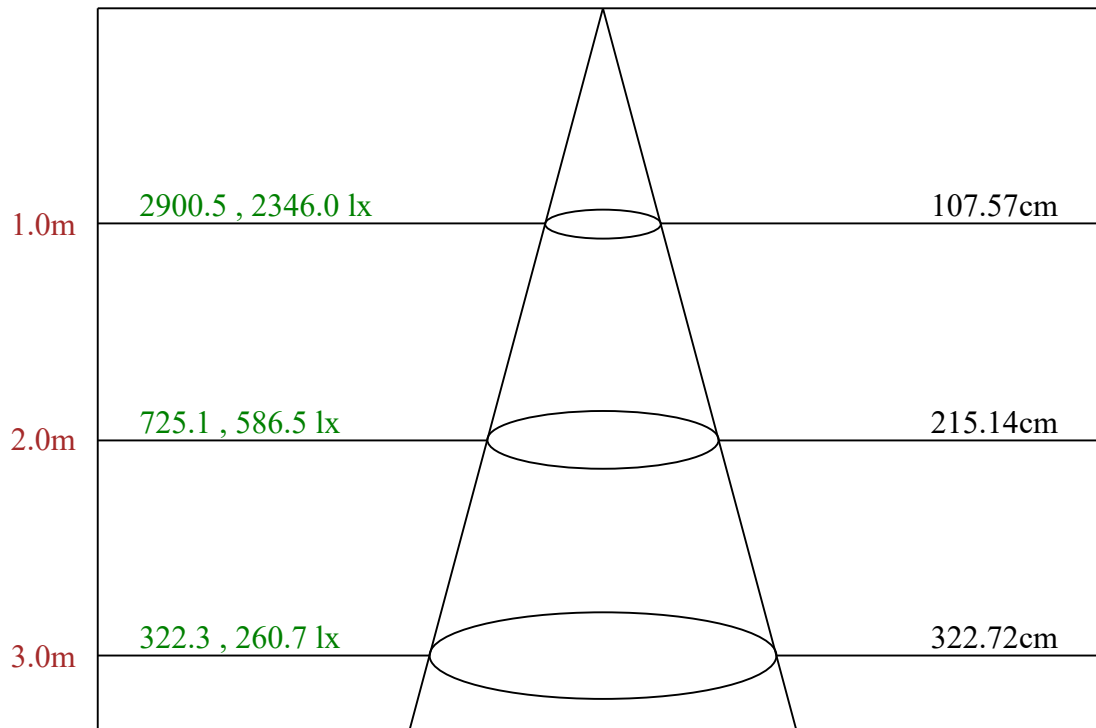
0-10	264.97
10-20	664.03
20-30	776.09
30-40	394.28
40-50	37.42
50-60	10.42
60-70	9.99
70-80	9.95
80-90	4.90
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



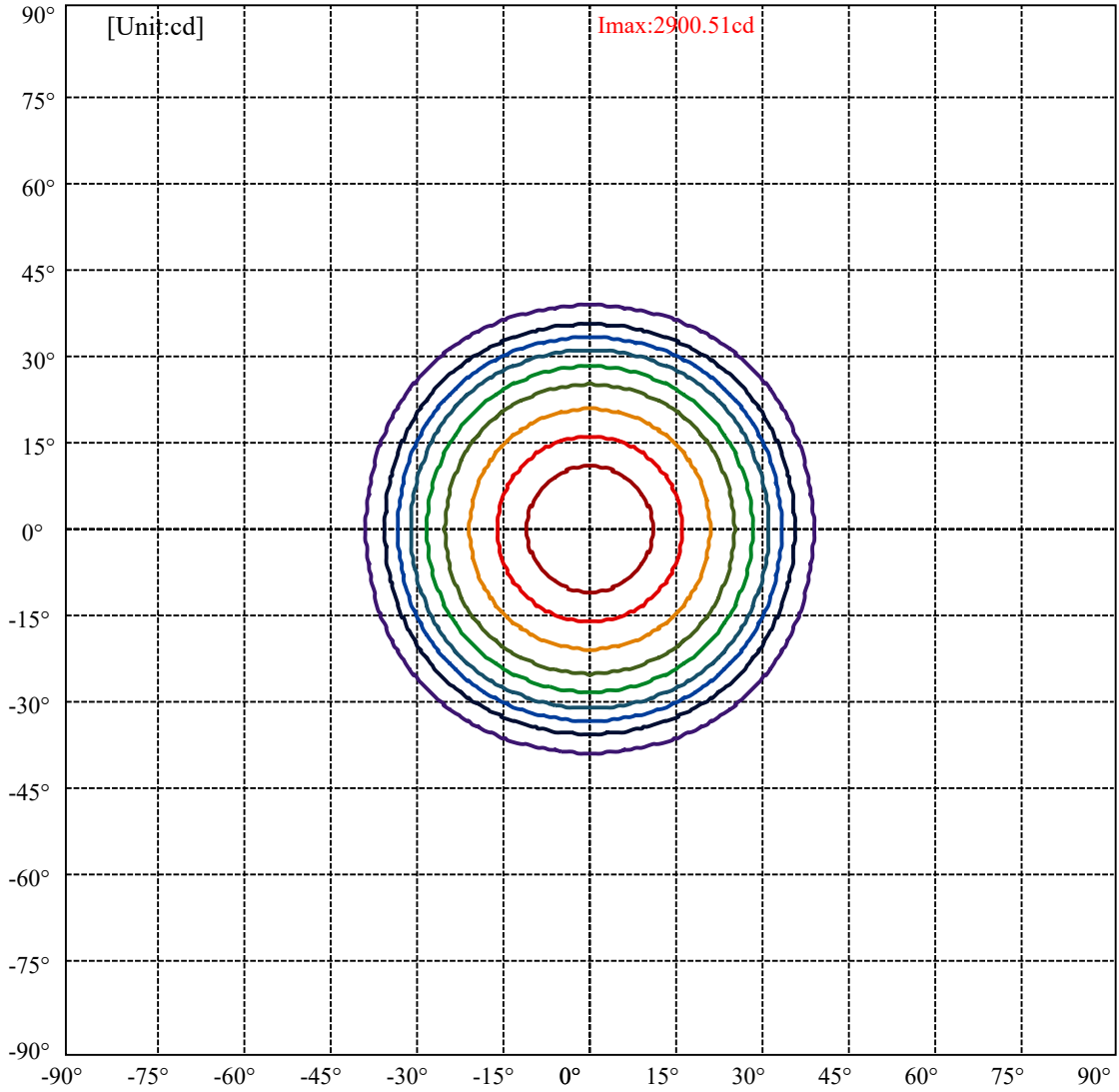
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:38.4 Right:38.4
:C90/270Left:38.4 Right:38.4

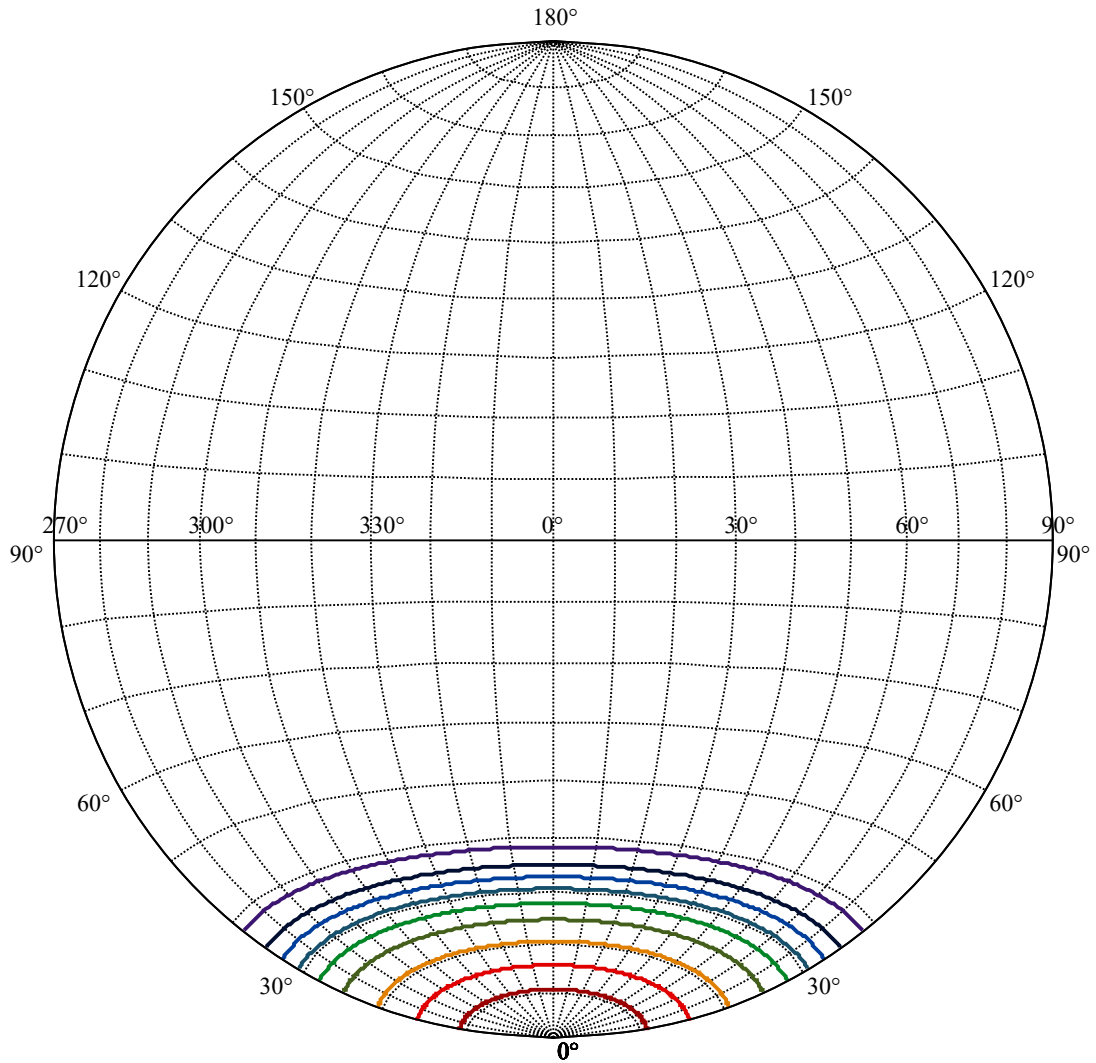
Beam Angle(50%Imax):C0/180Left:27.9 Right:27.9
:C90/270Left:27.9 Right:27.9



Max , Ave Beam angle of C0 plane 56.55



(10%Imax) 290.051	—
(20%Imax) 580.102	—
(30%Imax) 870.153	—
(40%Imax) 1160.2	—
(50%Imax) 1450.25	—
(60%Imax) 1740.31	—
(70%Imax) 2030.36	—
(80%Imax) 2320.41	—
(90%Imax) 2610.46	—



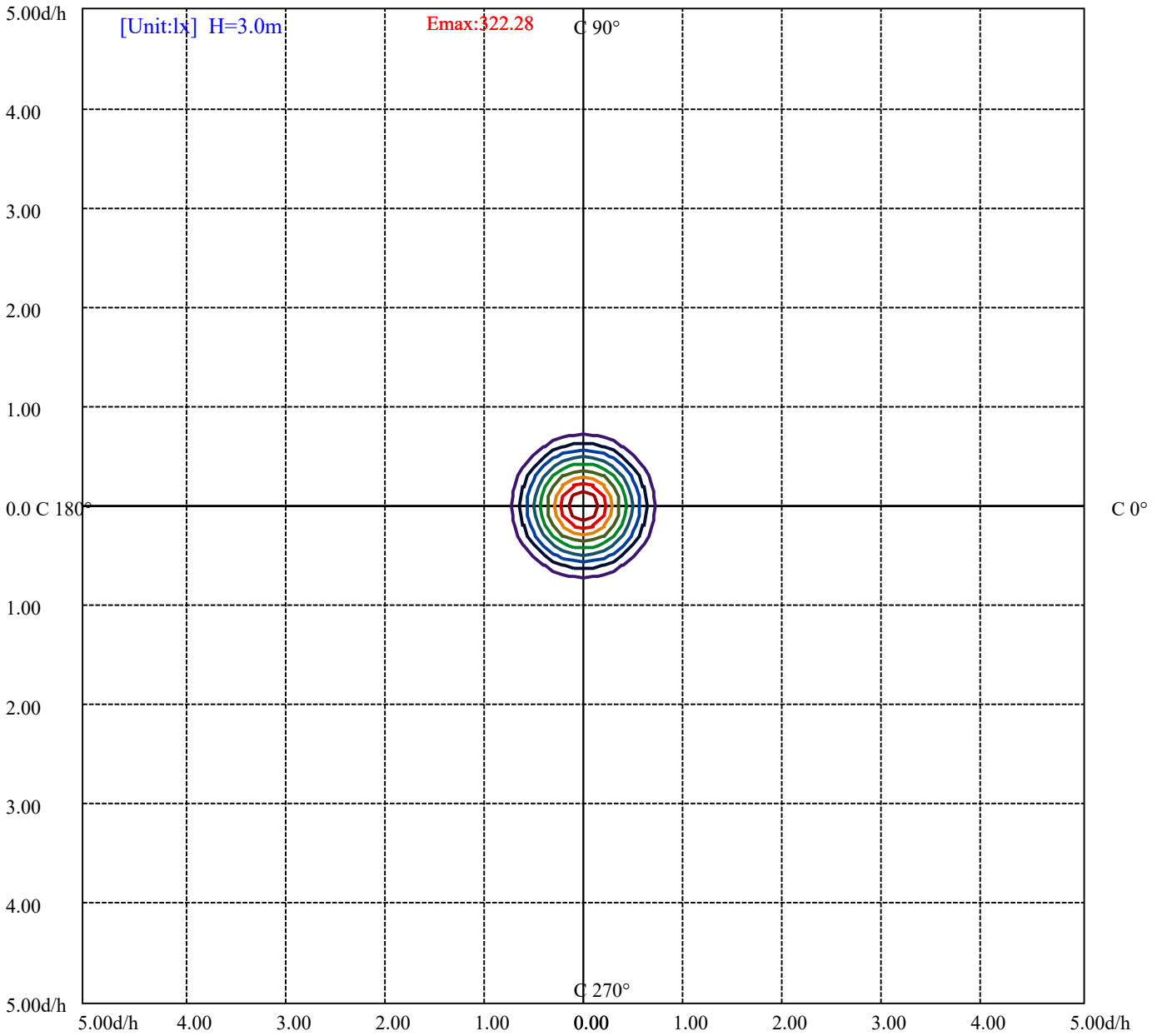
House

[Unit:cd]

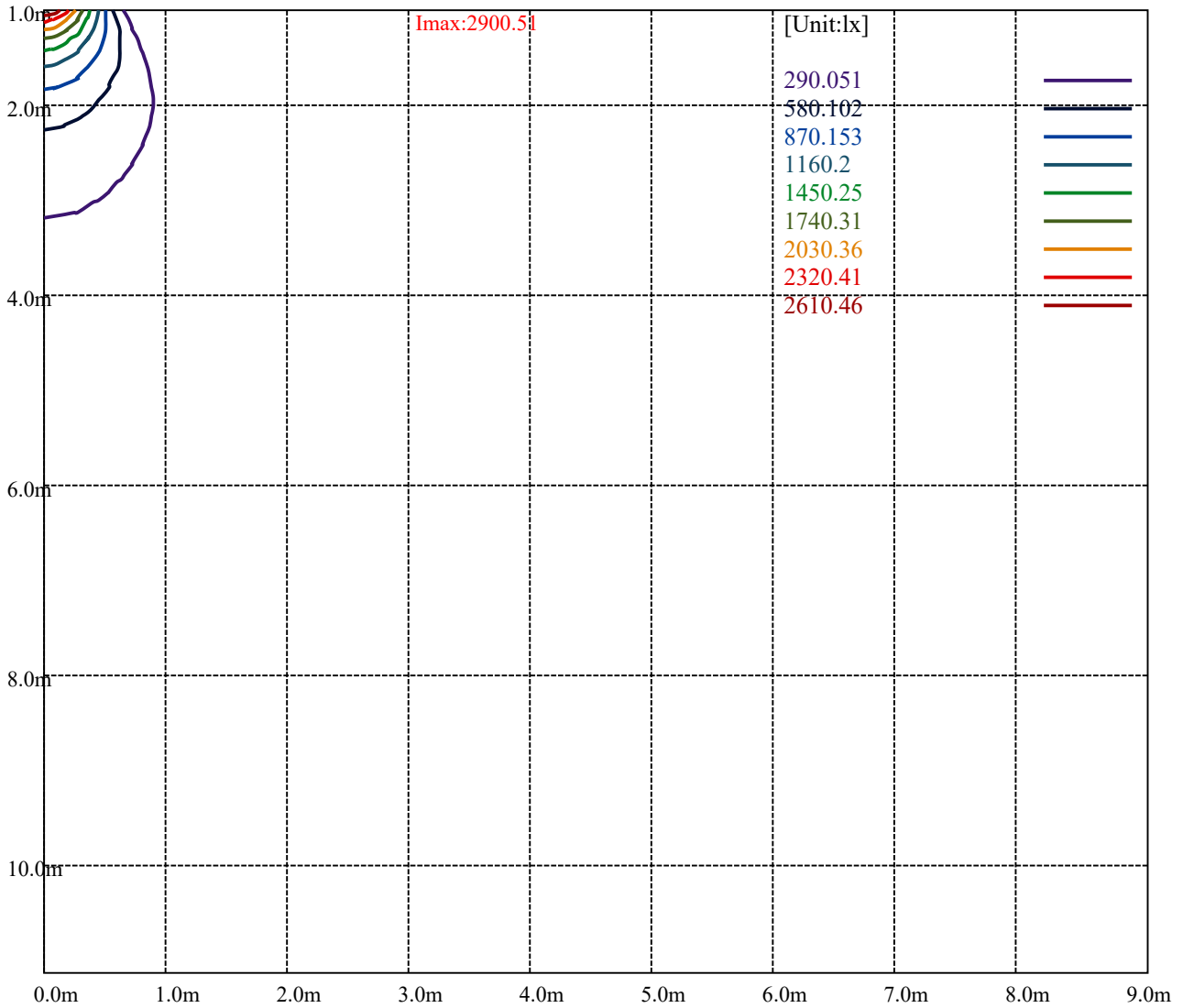
Road

I_{max}:2900.51

(10%I _{max})	290.051	—
(20%I _{max})	580.102	—
(30%I _{max})	870.153	—
(40%I _{max})	1160.2	—
(50%I _{max})	1450.25	—
(60%I _{max})	1740.31	—
(70%I _{max})	2030.36	—
(80%I _{max})	2320.41	—
(90%I _{max})	2610.46	—



- (10%Emax) 32.22789
- (20%Emax) 64.45567
- (30%Emax) 96.68356
- (40%Emax) 128.9111
- (50%Emax) 161.1389
- (60%Emax) 193.3667
- (70%Emax) 225.5944
- (80%Emax) 257.8233
- (90%Emax) 290.0511



Luminance Table

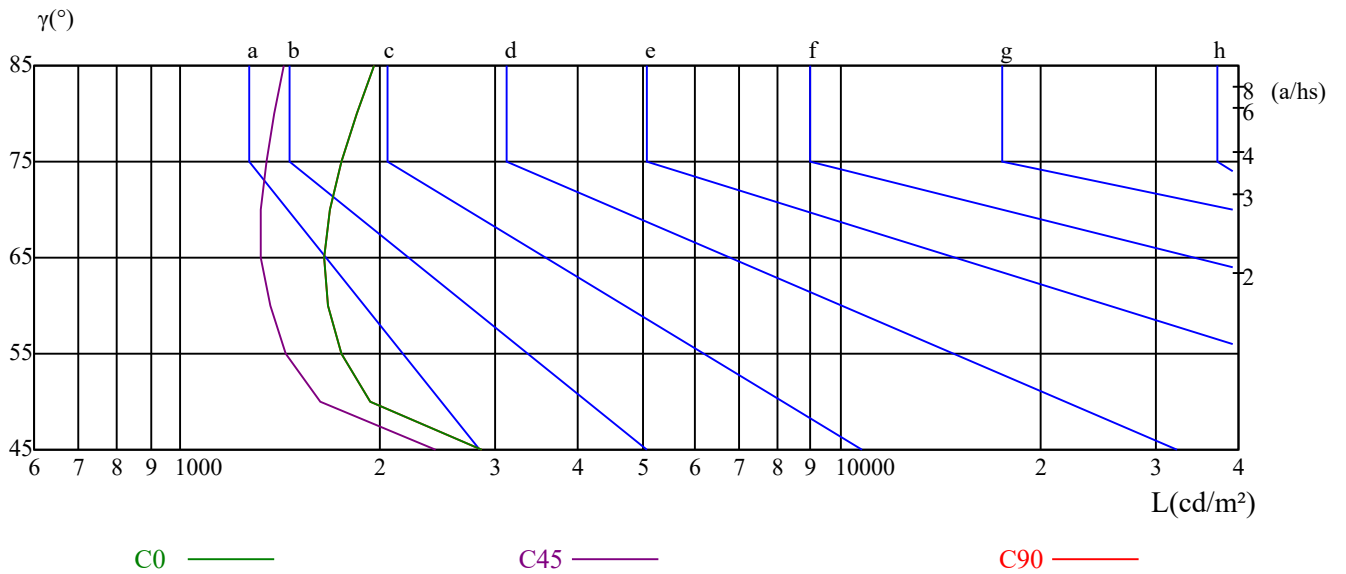
γ	45	50	55	60	65	70	75	80	85
C0	2849	1939	1751	1677	1655	1685	1754	1845	1962
C45	2428	1628	1447	1364	1322	1322	1347	1384	1433
C90	2849	1939	1751	1677	1655	1685	1754	1845	1962

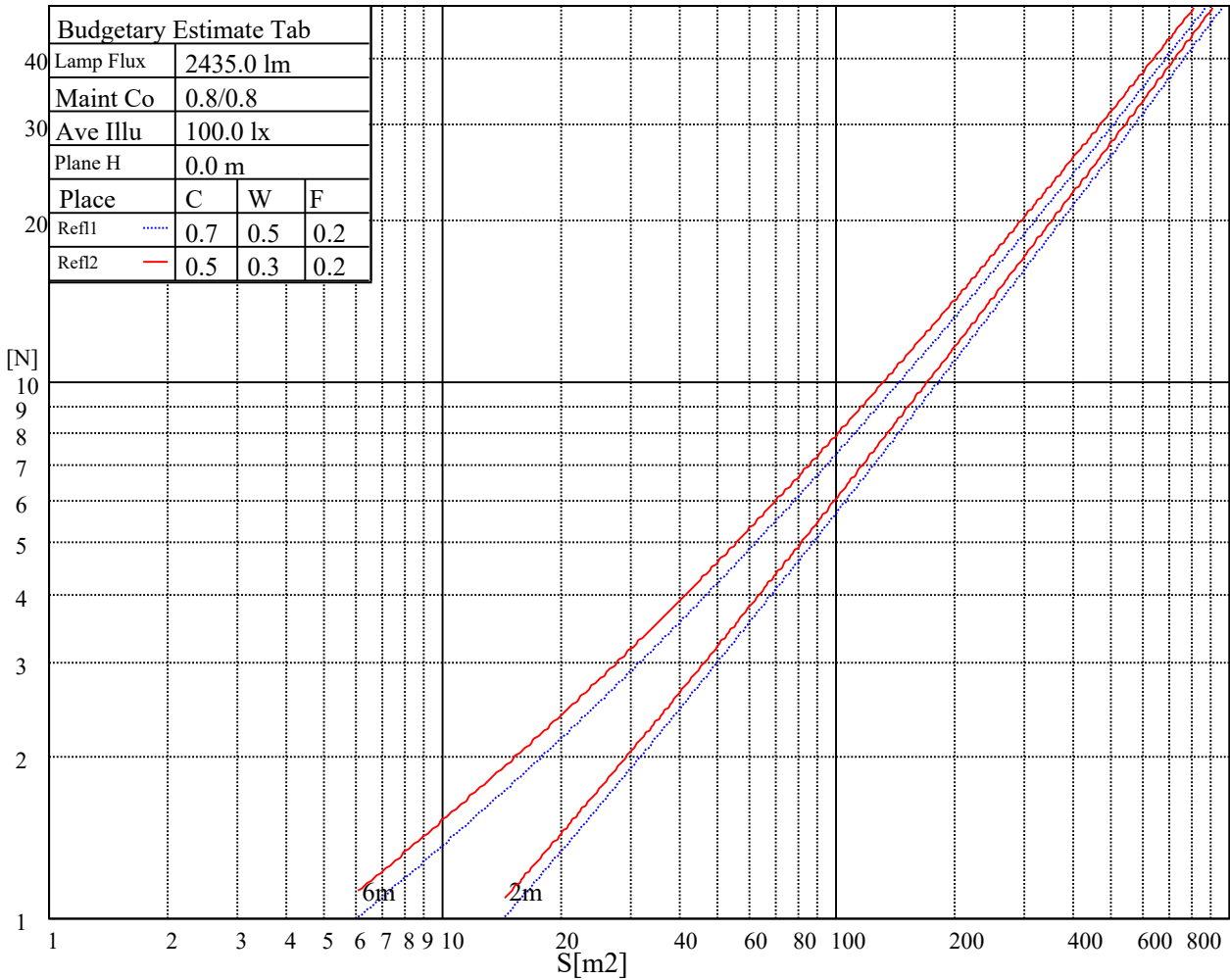
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4209	4209	4209	6467	6467	6467	18109	18109	18109

Glare Table

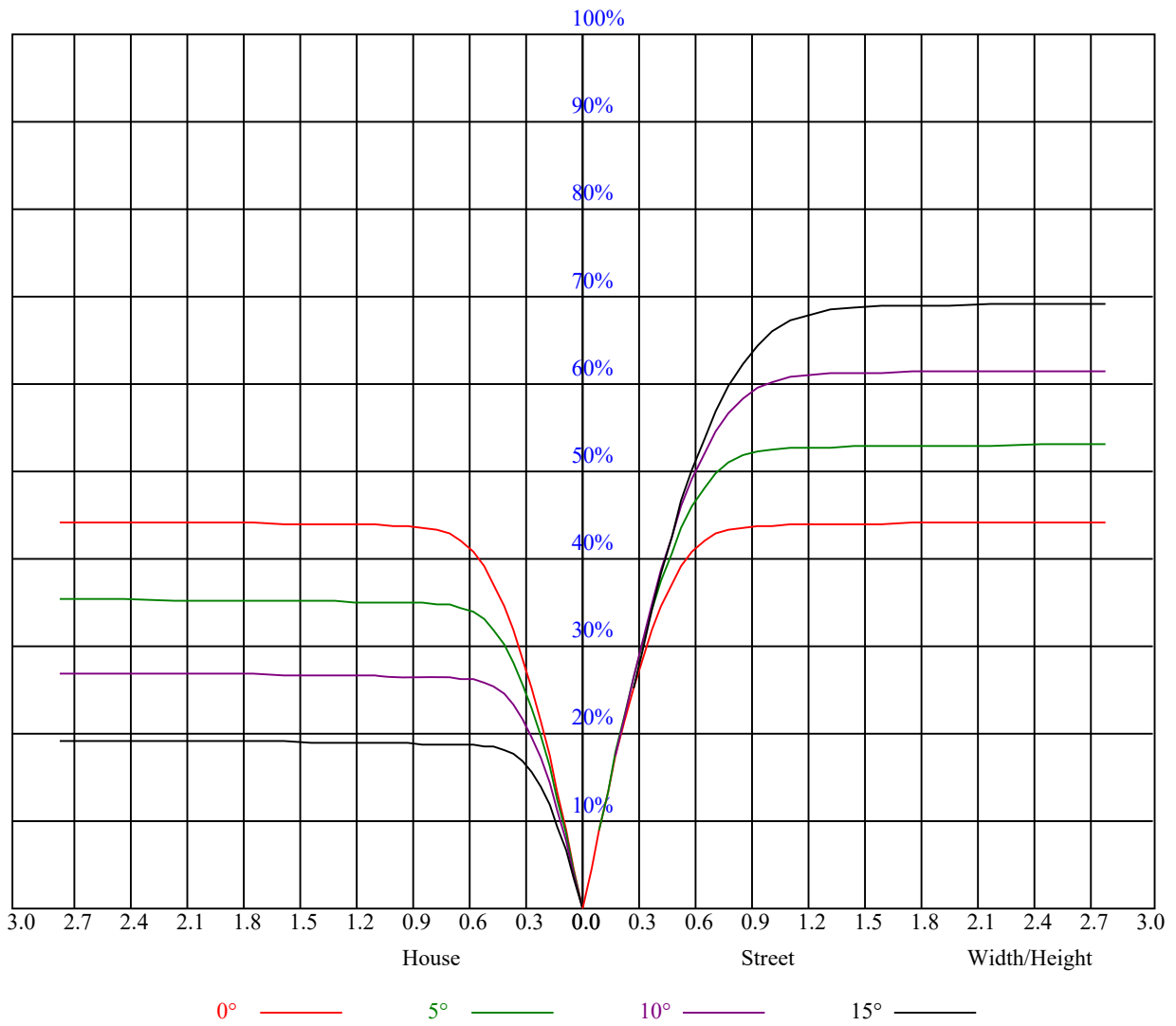
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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 RHOF=20 CU															
0	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.99	0.97	0.95	0.97	0.95	0.93	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.89	0.86	0.91	0.88	0.85	0.88	0.86	0.83	0.85	0.83	0.81	0.83	0.81	0.80	0.78
3	0.87	0.82	0.79	0.85	0.82	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.73
4	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	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	0.68	0.66	0.65
6	0.72	0.67	0.64	0.72	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
7	0.68	0.63	0.60	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.59	0.57
8	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.54
9	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.59	0.55	0.52	0.51
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.50	0.56	0.52	0.50	0.48



Nata 3-1920-E

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	2900.37	2866.79	2704.37	2449.46	2164.27	1841.64	1379.71	769.14	283.54
45.0	2903.12	2862.93	2707.12	2441.20	2152.71	1858.70	1425.41	820.34	309.42
90.0	2899.82	2826.05	2674.09	2373.48	2093.24	1782.18	1342.28	667.72	102.46
135.0	2898.72	2842.01	2699.42	2405.96	2102.60	1795.94	1376.96	701.97	302.81
180.0	2900.37	2815.03	2622.34	2296.40	1988.64	1630.22	1073.05	433.13	48.01
225.0	2903.12	2816.13	2607.47	2287.04	1995.79	1609.30	1094.14	373.83	40.85
270.0	2899.82	2828.80	2635.00	2358.07	2042.04	1674.82	1243.72	502.11	45.86
315.0	2898.72	2815.03	2601.97	2337.14	2034.33	1646.19	1081.75	452.51	43.94
360.0	2900.37	2866.79	2704.37	2449.46	2164.27	1841.64	1379.71	769.14	283.54

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	22.24	13.38	11.62	10.68	10.02	9.69	9.36	9.14	8.86
45.0	24.83	14.09	11.84	10.85	10.19	9.74	9.47	9.19	8.86
90.0	22.52	13.49	11.56	10.68	10.13	9.91	10.13	9.63	9.03
135.0	21.80	13.43	11.73	10.79	10.13	9.74	9.41	9.19	8.97
180.0	16.57	12.55	11.29	10.46	9.97	9.58	9.30	9.03	8.86
225.0	15.31	12.33	11.23	10.41	9.86	9.52	9.25	9.08	8.81
270.0	16.68	12.61	11.29	10.57	9.97	9.58	9.19	9.03	8.81
315.0	15.97	12.33	11.12	10.35	9.80	9.47	9.19	8.97	8.81
360.0	22.24	13.38	11.62	10.68	10.02	9.69	9.36	9.14	8.86

C/γ(°)	90.0
0.0	8.81
45.0	8.81
90.0	8.75
135.0	8.75
180.0	8.75
225.0	8.75
270.0	8.75
315.0	8.81
360.0	8.81