
Nata

LumCAT: 2-1676-M	
Luminaire: 92.70.131.00	
Report No: NT2017061703	Voltage(V): 34.6000
Test No: GC2017061703	Current(A): 0.5000
LampCAT: BRIDGELUX V13B	Power (W): 17.3000
Lamp flux(lm): 2579.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 70	Width(mm): 70
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 2361.01
Efficiency(%): 91.55%
Lumens(lm)/Power(W): 136.47
Central intensity(cd): 5257.061
Maximum intensity(cd): 5257.061
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=35.3
[C90/270]Total=35.3
Field angle(10%Imax): [C0/180]Total=70.2
[C90/270]Total=70.2
Maximum s/h(1/2): C0_180=0.58 C90_270=0.58
Maximum s/h(1/4): C0_180=0.59 C90_270=0.59
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 91.55%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.729%

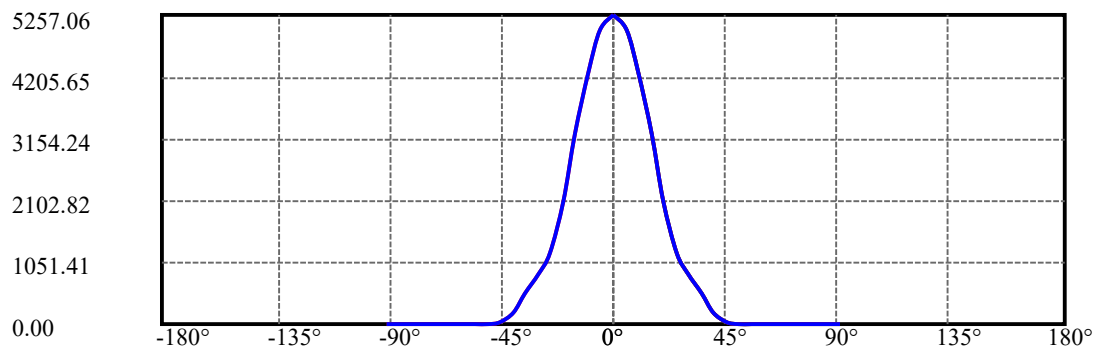
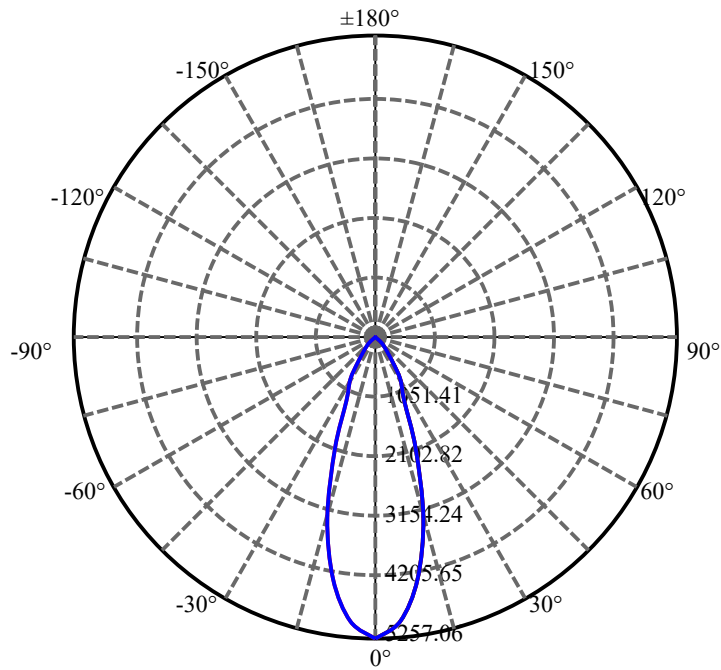
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5257.060	0.000	0	.000%	.000%
5.0	4986.389	122.458	122.458	4.748%	5.187%
10.0	4284.833	331.661	454.118	12.860%	19.234%
15.0	3244.405	446.629	900.748	17.318%	38.151%
20.0	2075.282	438.417	1339.165	16.999%	56.720%
25.0	1223.023	345.931	1685.096	13.413%	71.372%
30.0	860.745	263.703	1948.799	10.225%	82.541%
35.0	532.932	205.229	2154.027	7.958%	91.233%
40.0	191.314	120.835	2274.862	4.685%	96.351%
45.0	21.190	39.347	2314.209	1.526%	98.018%
50.0	12.298	6.767	2320.976	.262%	98.304%
55.0	11.011	5.068	2326.044	.197%	98.519%
60.0	10.378	4.944	2330.988	.192%	98.729%
65.0	9.986	4.951	2335.939	.192%	98.938%
70.0	9.669	4.977	2340.916	.193%	99.149%
75.0	9.477	5.004	2345.92	.194%	99.361%
80.0	9.311	5.027	2350.947	.195%	99.574%
85.0	9.229	5.038	2355.985	.195%	99.787%
90.0	9.112	5.022	2361.007	.195%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1948.80	75.56%	82.54%
0-40	2274.86	88.21%	96.35%
0-60	2330.99	90.38%	98.73%
0-90	2355.98	91.35%	99.79%
0-120	2355.98	91.35%	99.79%
0-180	2361.01	91.55%	100.00%
60-90	29.94	1.16%	1.27%
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%
0-28.86	1888.81	73.24%	80.00%

ZONAL LUMEN SUMMARY

0-10	454.12
10-20	885.05
20-30	609.63
30-40	326.06
40-50	46.11
50-60	10.01
60-70	9.93
70-80	10.03
80-90	5.04
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:

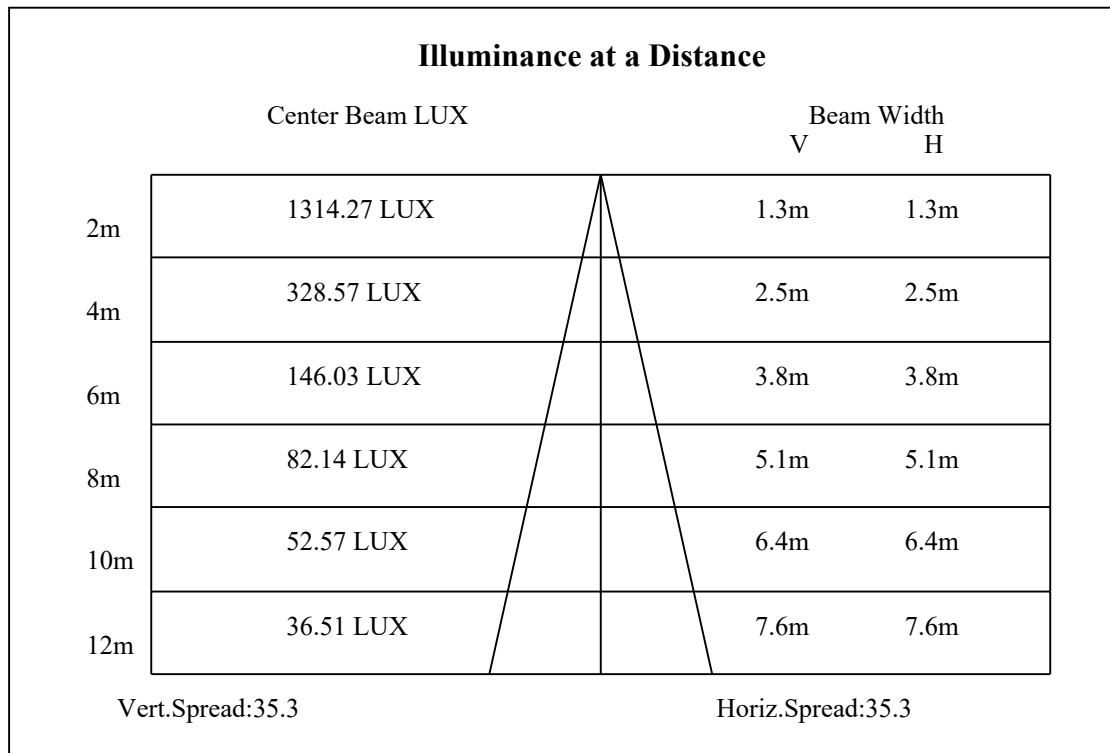
C90/C270:

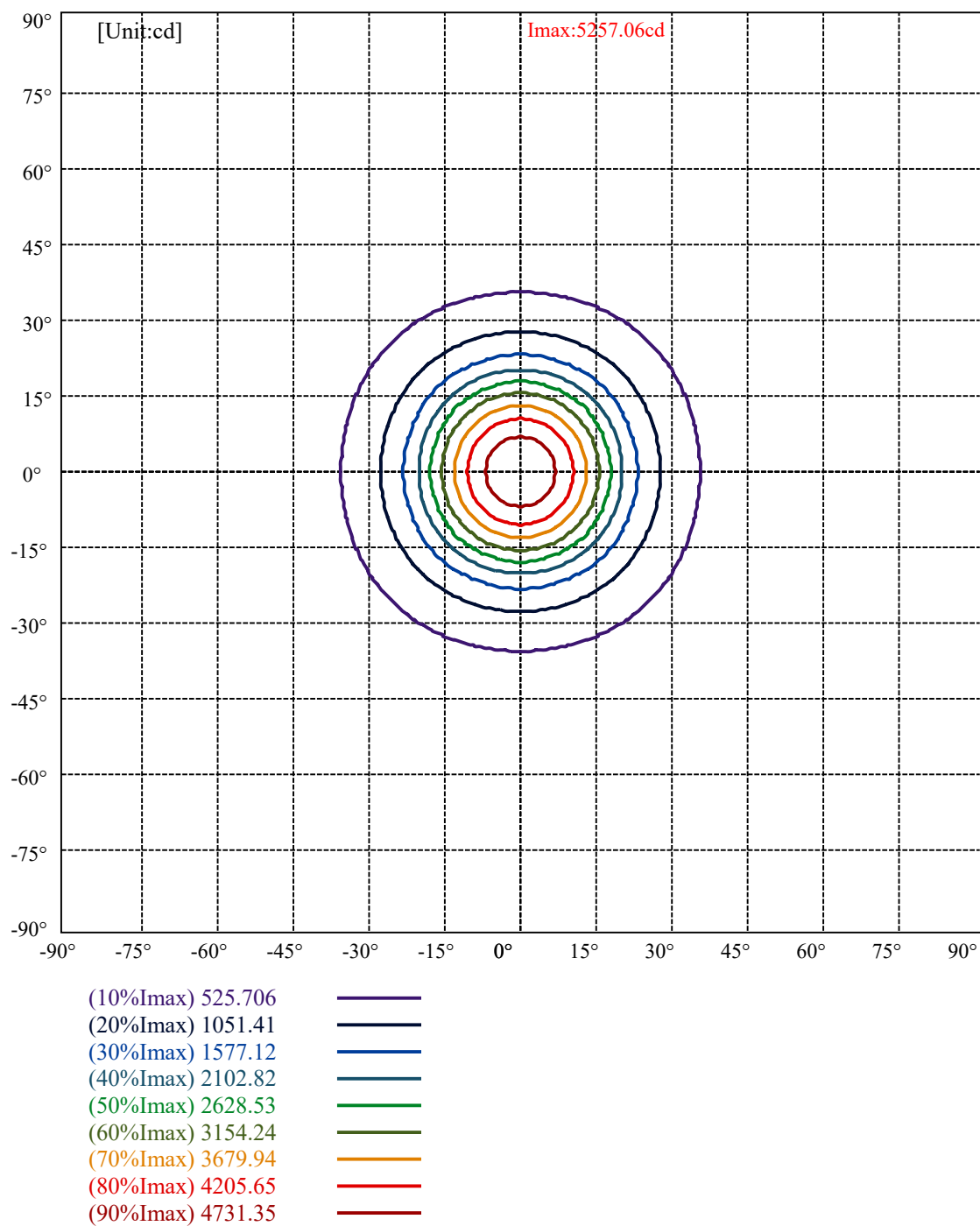
Field angle(10%I_{max}):C0/180Left:35.1 Right:35.1

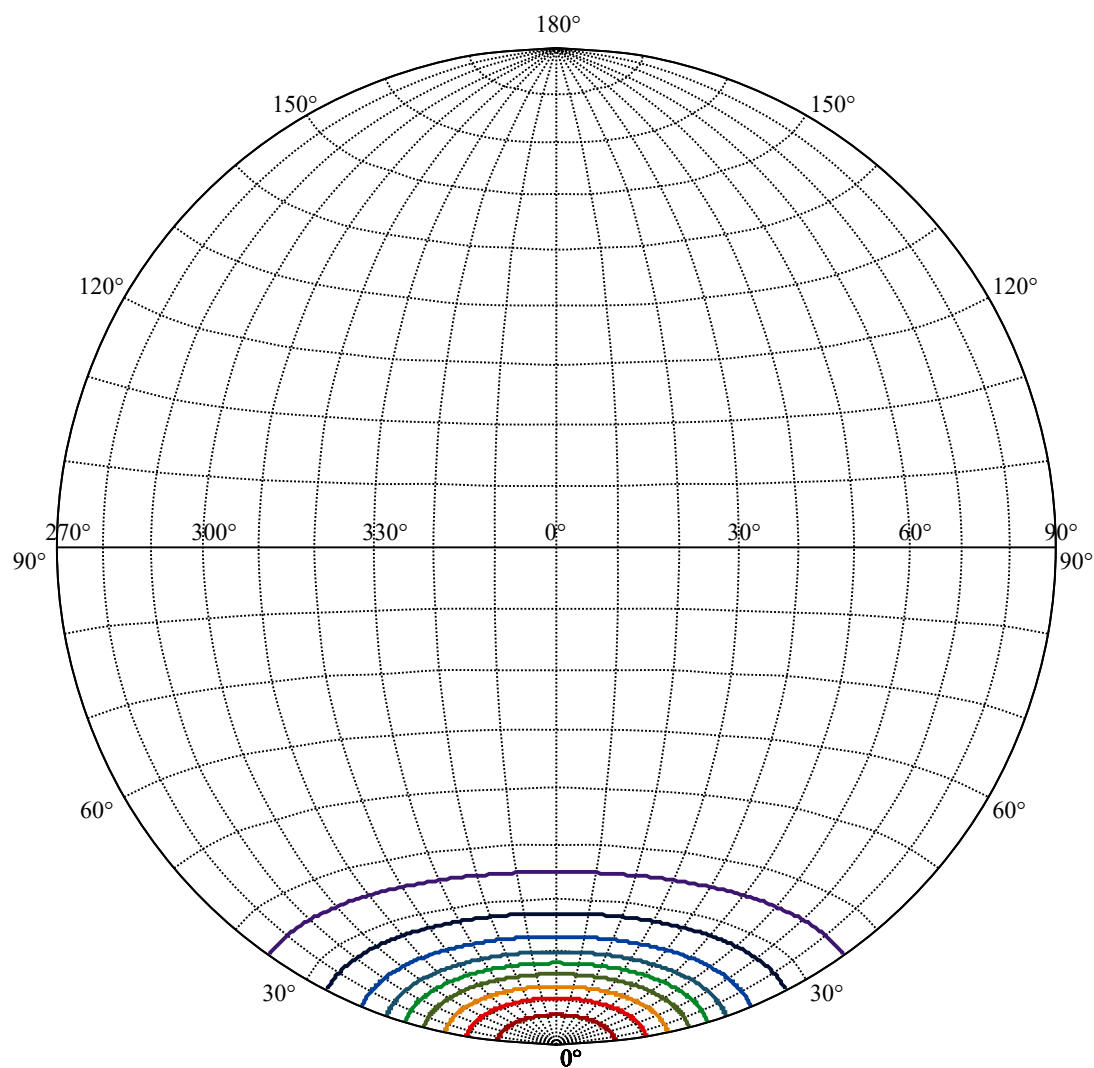
:C90/270Left:35.1 Right:35.1

Beam Angle(50%I_{max}):C0/180Left:17.6 Right:17.6

:C90/270Left:17.6 Right:17.6







House

[Unit:cd]

Road

Imax:5257.06

(10%Imax) 525.706

(20%Imax) 1051.41

(30%Imax) 1577.12

(40%Imax) 2102.82

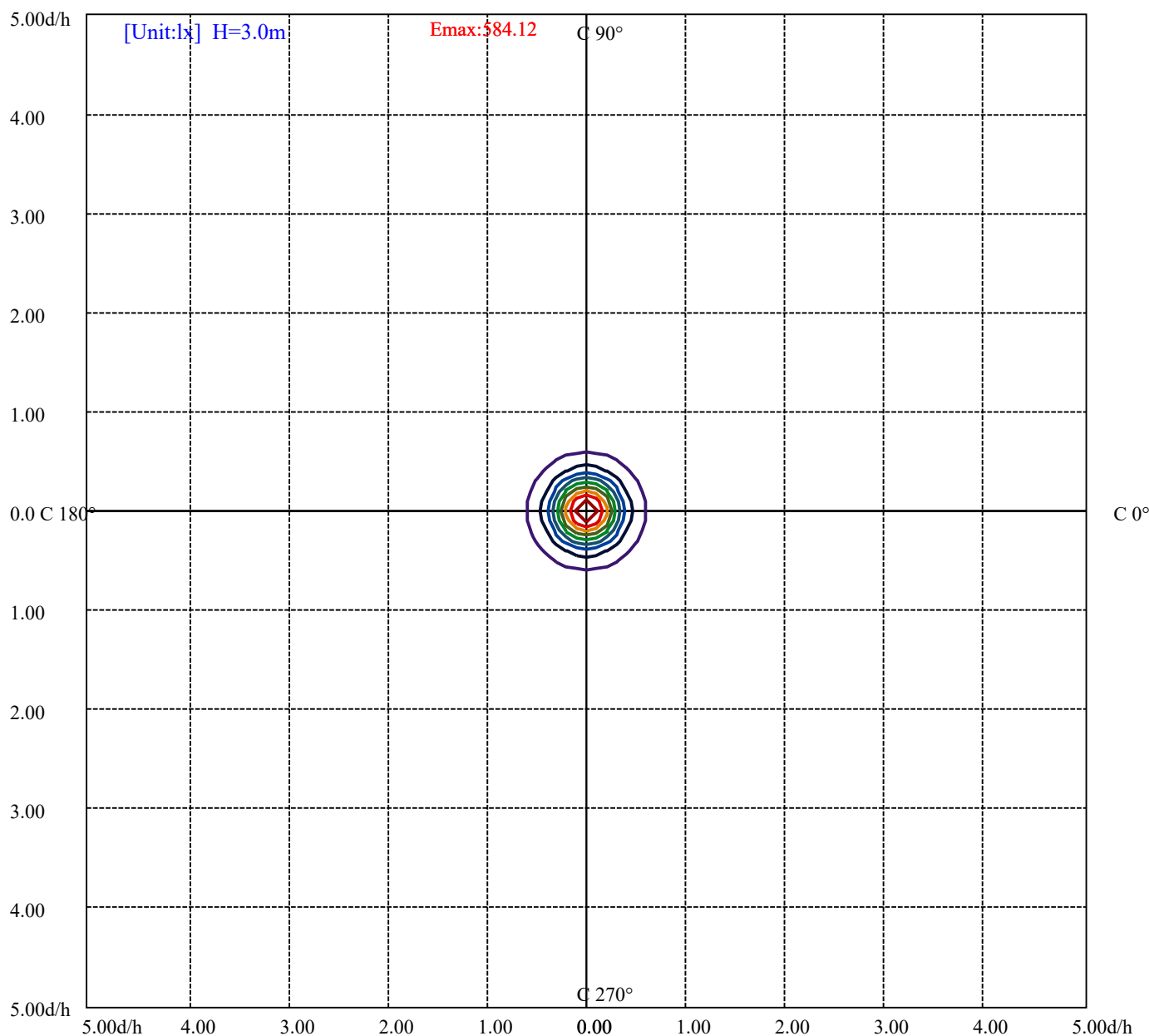
(50%Imax) 2628.53

(60%Imax) 3154.24

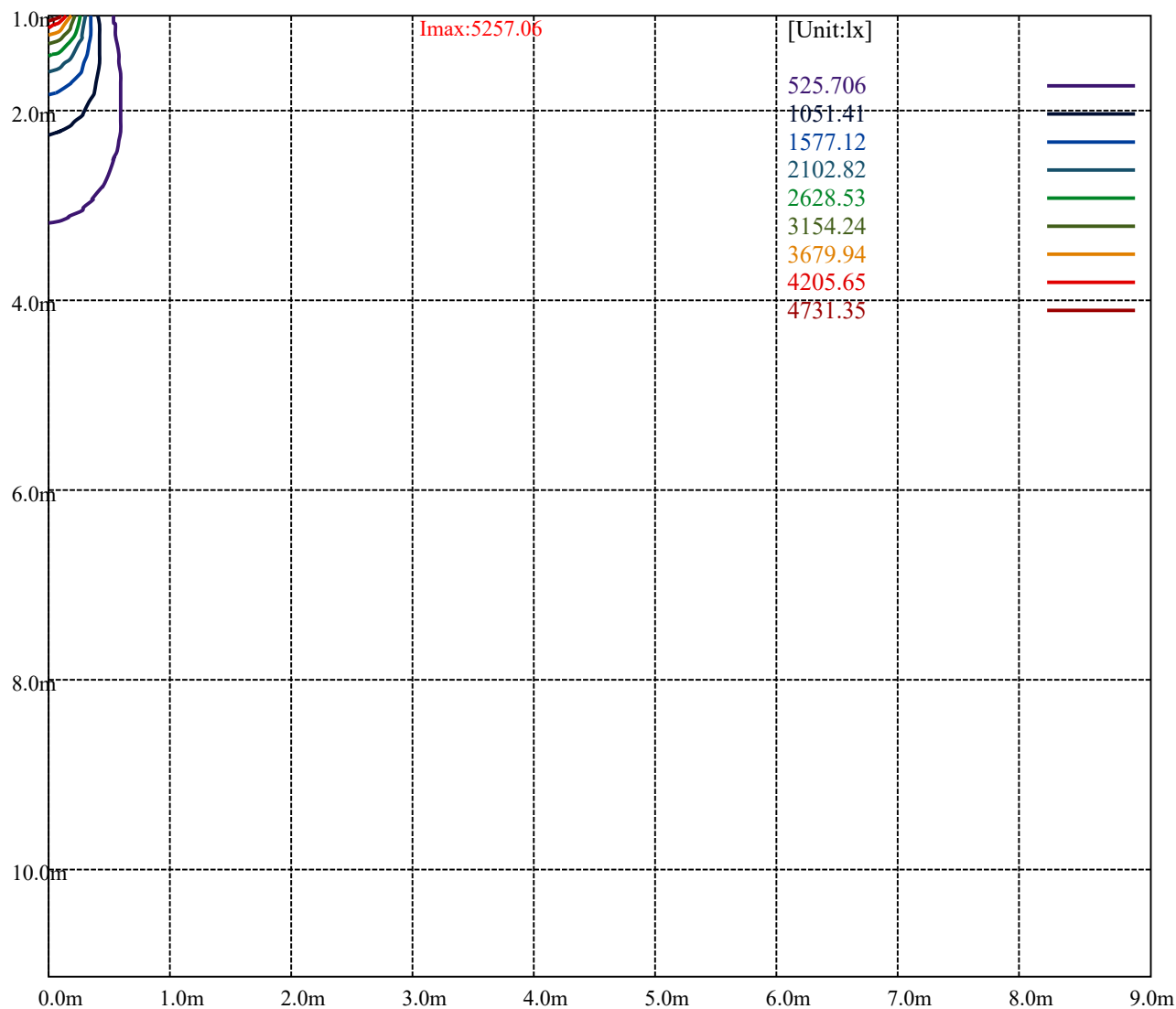
(70%Imax) 3679.94

(80%Imax) 4205.65

(90%Imax) 4731.35



(10%Emax) 58.41167	
(20%Emax) 116.8233	
(30%Emax) 175.2355	
(40%Emax) 233.6467	
(50%Emax) 292.0589	
(60%Emax) 350.47	
(70%Emax) 408.8822	
(80%Emax) 467.2933	
(90%Emax) 525.7056	



Luminance Table

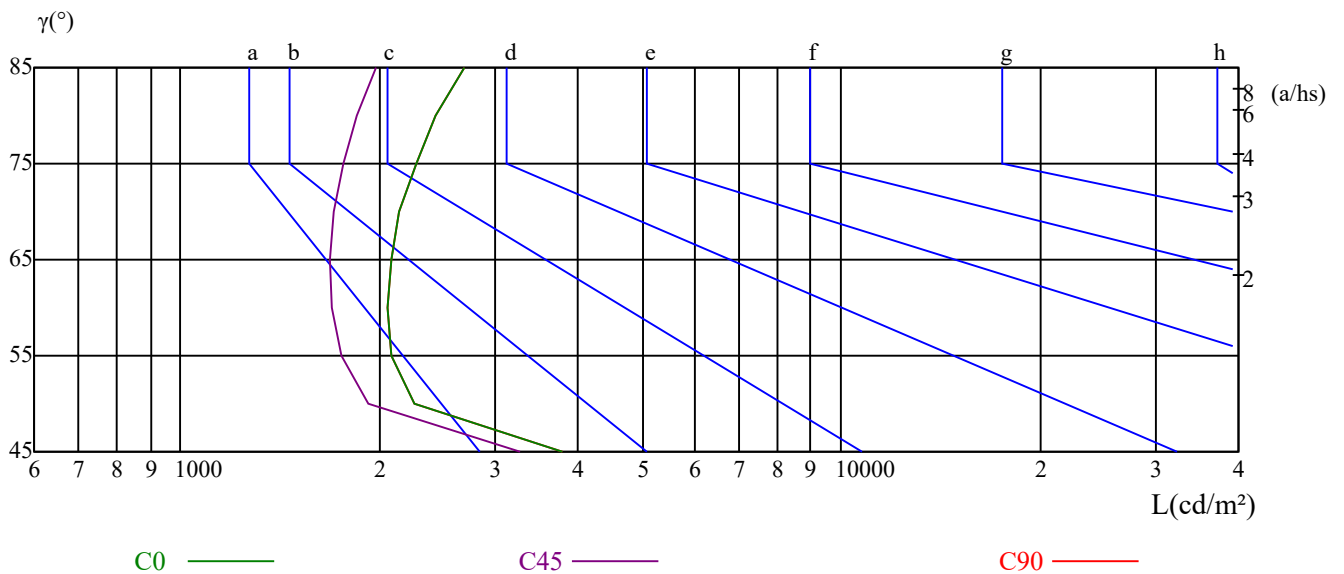
γ	45	50	55	60	65	70	75	80	85
C0	3788	2254	2087	2052	2081	2147	2269	2441	2694
C45	3273	1918	1749	1691	1684	1704	1761	1846	1977
C90	3788	2254	2087	2052	2081	2147	2269	2441	2694

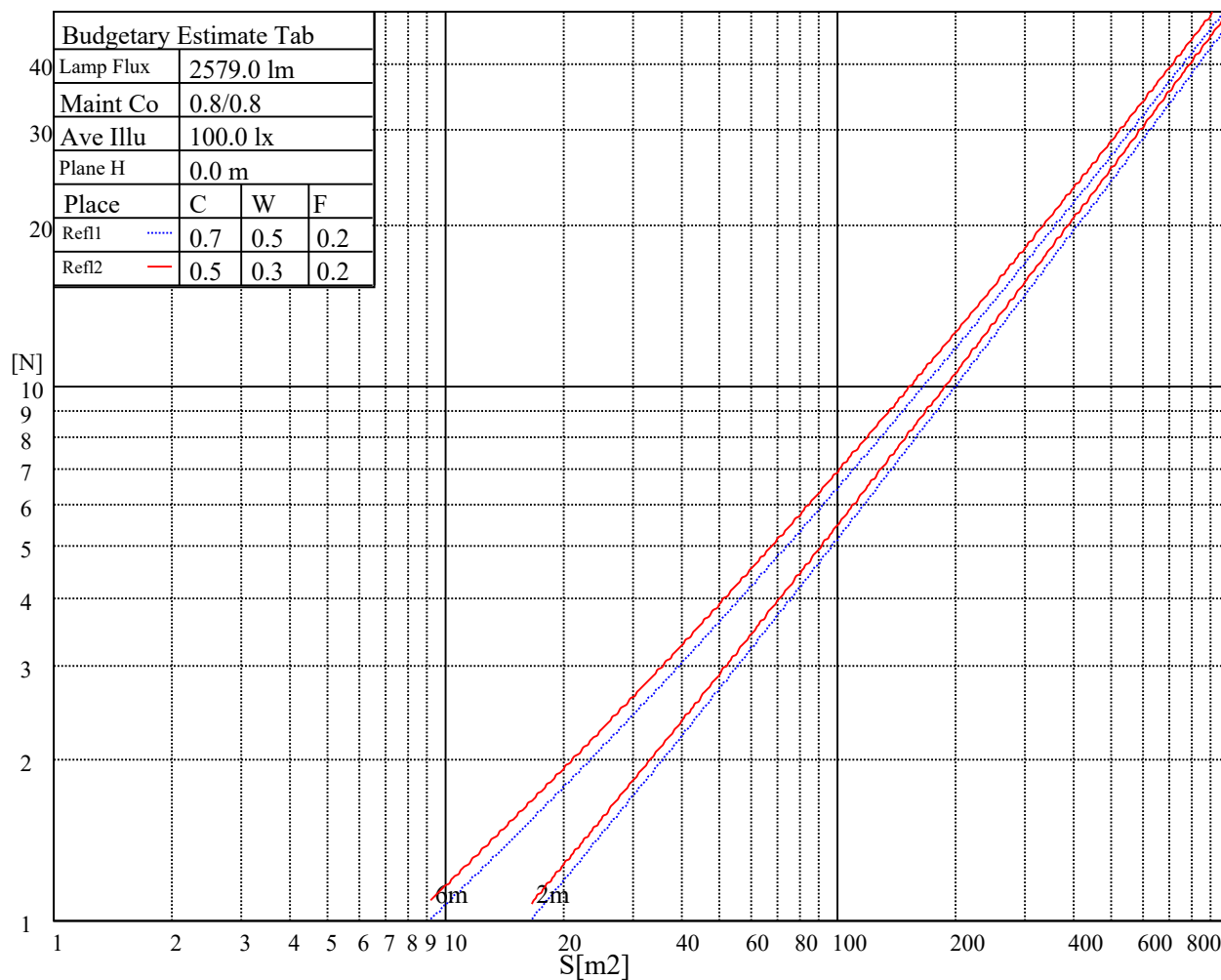
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4822	4822	4822	7472	7472	7472	21610	21610	21610

Glare Table

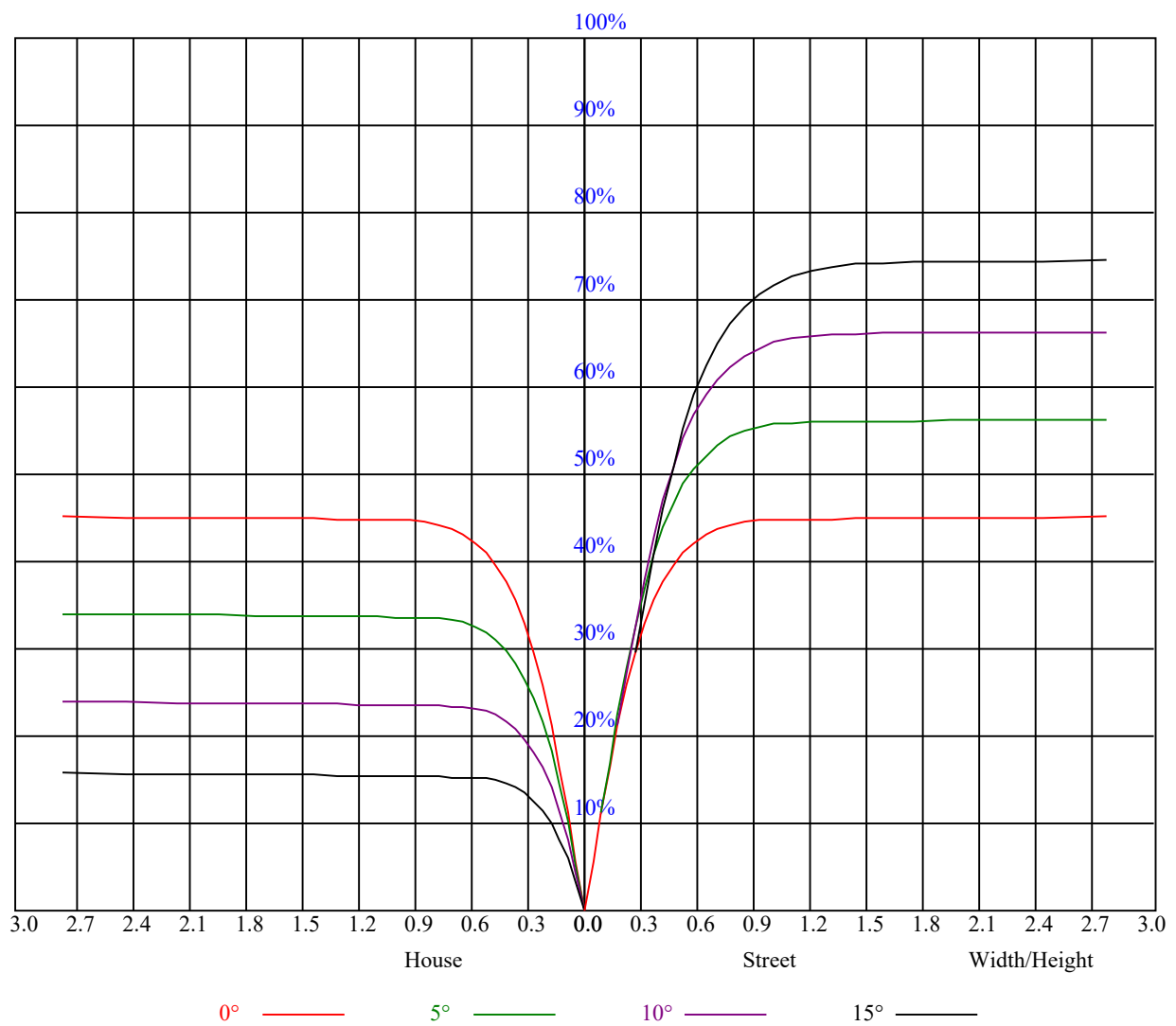
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.92
1	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.95	0.93	0.93	0.92	0.91	0.90	0.89	0.88	0.86
2	0.96	0.93	0.90	0.94	0.91	0.89	0.91	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.82
3	0.90	0.86	0.83	0.89	0.85	0.82	0.87	0.84	0.81	0.85	0.82	0.80	0.83	0.81	0.79	0.77
4	0.86	0.81	0.78	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.77	0.75	0.73
5	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.70
6	0.77	0.72	0.69	0.77	0.72	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.67	0.66
7	0.74	0.69	0.65	0.73	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.63
8	0.70	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.60
9	0.67	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.58
10	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.55



Nata 2-1676-M

Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	5177.50	5280.46	4763.48	3916.71	2846.97	1598.29	1011.94	790.06	399.16		
45.0	5323.40	5135.11	4497.56	3516.45	2266.12	1206.29	891.36	663.98	287.94		
90.0	5233.11	4679.24	3819.81	2540.30	1393.48	908.43	723.00	301.82	23.62		
135.0	5294.22	4813.03	4044.44	2851.37	1661.05	1013.59	769.14	342.45	27.31		
180.0	5177.50	4623.64	3696.49	2505.62	1392.93	926.98	686.61	262.29	21.47		
225.0	5323.40	4878.00	4045.54	2932.30	1626.37	1023.77	796.89	410.56	71.24		
270.0	5233.11	5289.82	4837.81	4007.56	2897.07	1710.60	1053.23	799.97	452.56		
315.0	5294.22	5191.82	4573.54	3684.92	2518.28	1396.23	953.80	692.33	247.20		
360.0	5177.50	5280.46	4763.48	3916.71	2846.97	1598.29	1011.94	790.06	399.16		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	29.46	14.20	11.51	10.68	10.13	9.80	9.58	9.36	9.25		
45.0	21.42	12.06	11.07	10.52	10.02	9.74	9.58	9.41	9.30		
90.0	12.66	11.40	10.68	10.08	9.80	9.52	9.36	9.25	9.14		
135.0	12.72	11.45	10.68	10.08	9.80	9.47	9.30	9.19	9.14		
180.0	11.95	11.12	10.35	10.02	9.69	9.47	9.25	9.08	9.14		
225.0	14.70	11.51	10.79	10.19	9.91	9.63	9.47	9.30	9.25		
270.0	45.75	14.09	11.62	10.85	10.35	9.91	9.69	9.47	9.30		
315.0	20.87	12.55	11.40	10.63	10.19	9.80	9.58	9.41	9.30		
360.0	29.46	14.20	11.51	10.68	10.13	9.80	9.58	9.36	9.25		
C/γ(°)	90.0										
0.0	9.14										
45.0	9.19										
90.0	9.14										
135.0	8.97										
180.0	8.97										
225.0	9.14										
270.0	9.14										
315.0	9.19										
360.0	9.14										