
Nata

LumCAT: 1679-S

Luminaire: 92.70.043.00

Report No: NT2017112405

Test No: nata-0100

LampCAT: CREE CXA1310

Lamp flux(lm): 658.0

Number of Lamps: 1

Length(mm): 23

Phm Type: C

Voltage(V): 18.0000

Current(A): 0.3600

Power (W): 6.4800

PF: 0.0000

Ballast type: DC

Width(mm): 23

Height(mm): 0

Photometric Results

Lumens(lm): 579.53

Efficiency(%): 88.07%

Lumens(lm)/Power(W): 89.43

Central intensity(cd): 561.052

Maximum intensity(cd): 561.052

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=65.3

[C90/270]Total=65.3

Field angle(10%Imax): [C0/180]Total=88.8

[C90/270]Total=88.8

Maximum s/h(1/2): C0_180=0.98 C90_270=0.98

Maximum s/h(1/4): C0_180=0.97 C90_270=0.97

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.50%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.066%

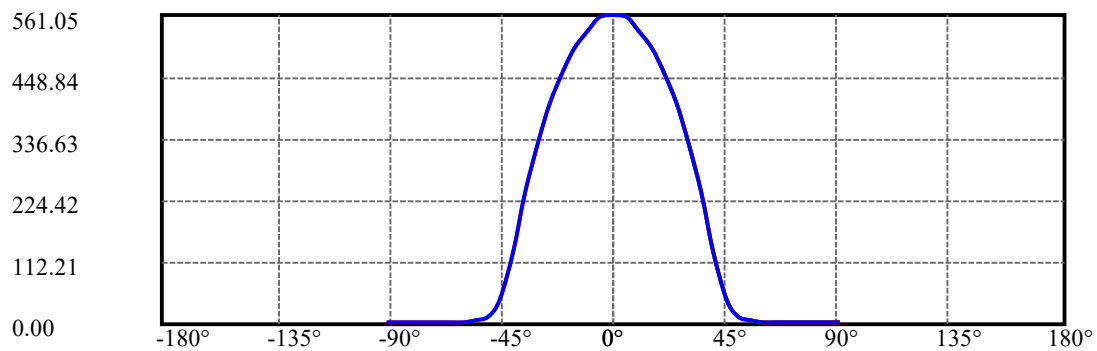
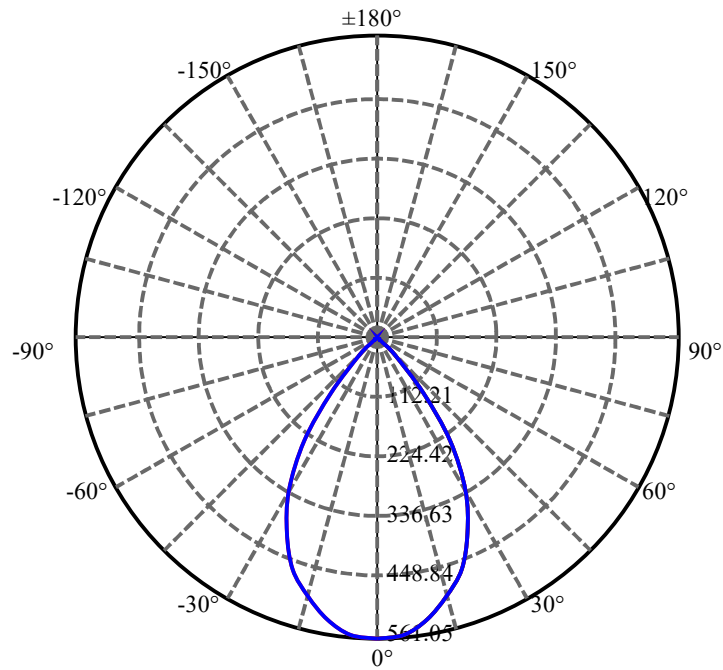
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	561.052	3.355	3.355	.510%	.579%
5.0	556.545	26.588	29.943	4.041%	5.167%
10.0	533.909	50.819	80.762	7.723%	13.936%
15.0	500.098	70.948	151.71	10.782%	26.178%
20.0	458.991	86.049	237.759	13.077%	41.026%
25.0	400.941	92.879	330.639	14.115%	57.053%
30.0	330.703	90.635	421.274	13.774%	72.693%
35.0	236.591	74.384	495.658	11.305%	85.528%
40.0	133.305	46.968	542.626	7.138%	93.632%
45.0	45.745	17.730	560.357	2.695%	96.692%
50.0	14.328	6.016	566.373	.914%	97.730%
55.0	6.125	2.750	569.123	.418%	98.205%
60.0	4.102	1.947	571.07	.296%	98.541%
65.0	3.455	1.716	572.787	.261%	98.837%
70.0	3.159	1.627	574.414	.247%	99.117%
75.0	2.952	1.563	575.977	.238%	99.387%
80.0	2.767	1.493	577.47	.227%	99.645%
85.0	2.601	1.421	578.891	.216%	99.890%
90.0	2.326	0.638	579.528	.097%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	421.27	64.02%	72.69%
0-40	542.63	82.47%	93.63%
0-60	571.07	86.79%	98.54%
0-90	578.89	87.98%	99.89%
0-120	578.89	87.98%	99.89%
0-180	579.53	88.07%	100.00%
60-90	9.77	1.48%	1.69%
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%
0-32.85	463.62	70.46%	80.00%

ZONAL LUMEN SUMMARY

0-10	80.76
10-20	157.00
20-30	183.51
30-40	121.35
40-50	23.75
50-60	4.70
60-70	3.34
70-80	3.06
80-90	1.42
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:

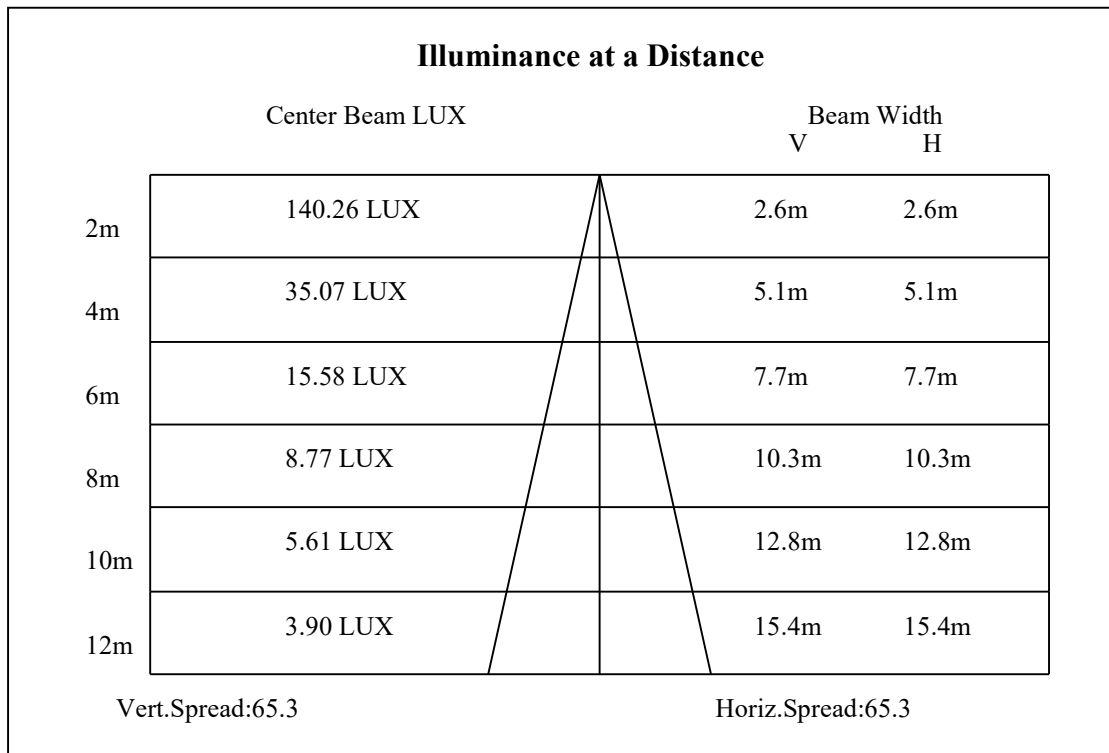
C90/C270:

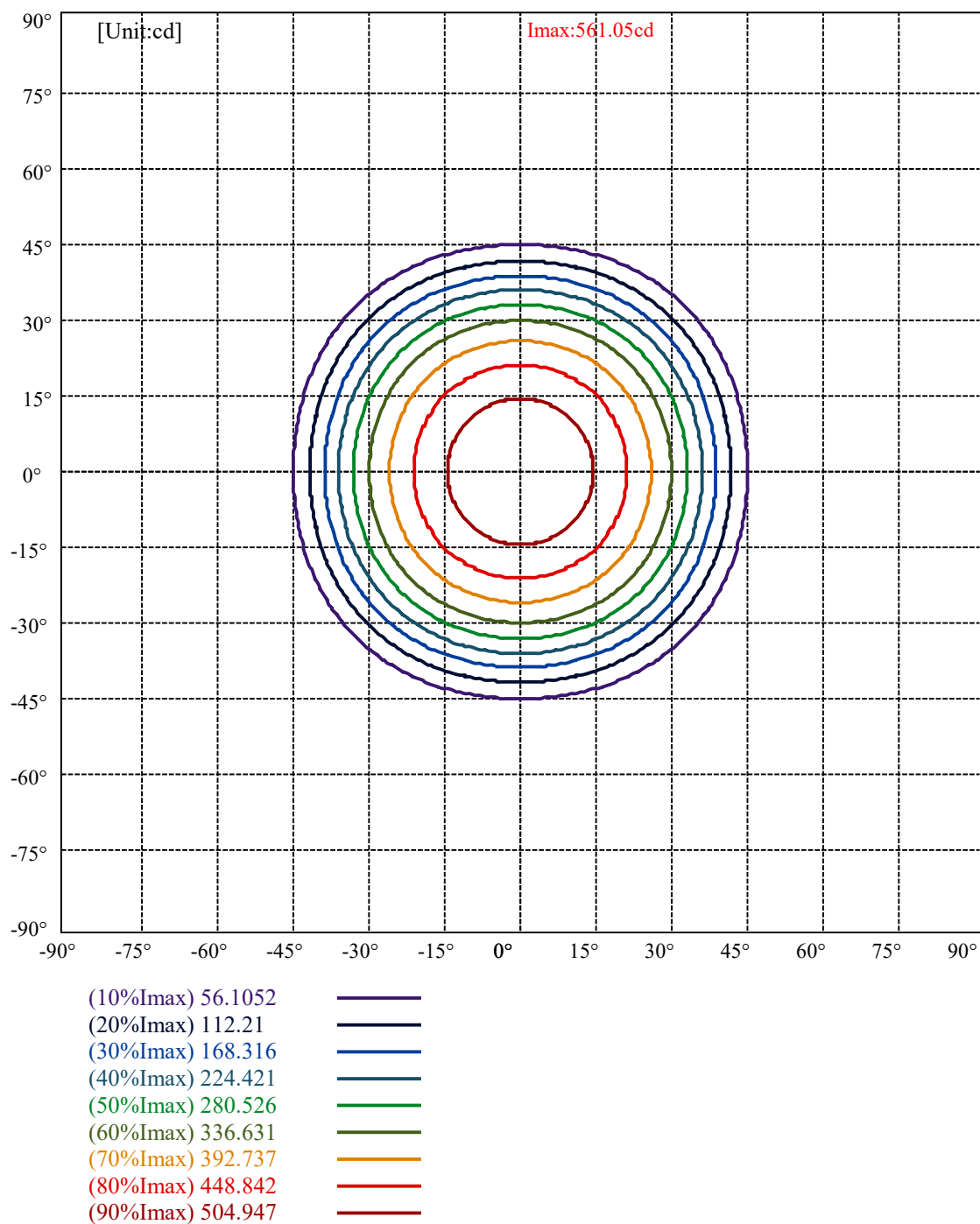
Field angle(10%Imax):C0/180Left:44.4 Right:44.4

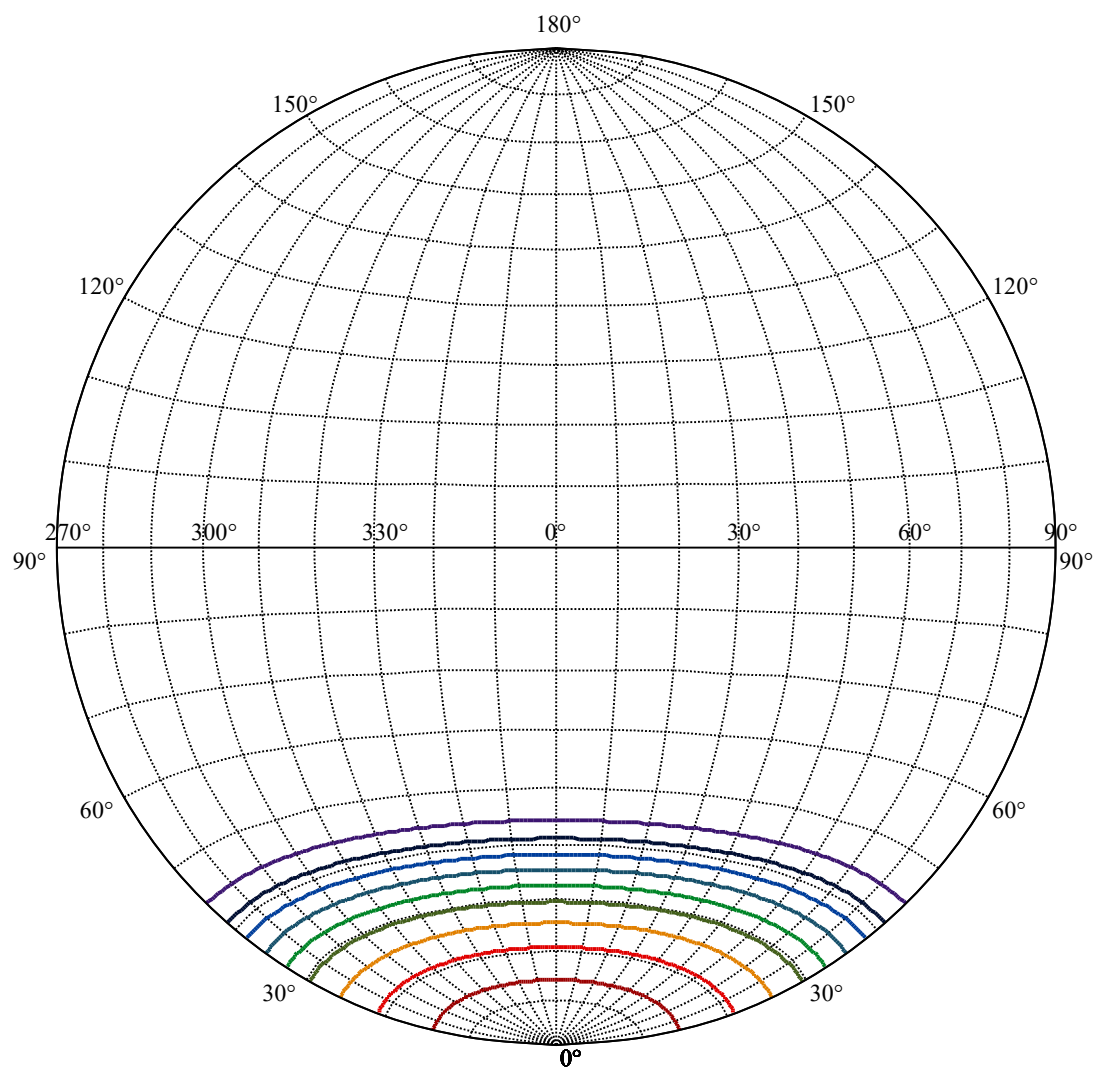
:C90/270Left:44.4 Right:44.4

Beam Angle(50%Imax):C0/180Left:32.7 Right:32.7

:C90/270Left:32.7 Right:32.7







House

[Unit:cd]

Road

Imax:561.05

(10%Imax) 56.1052

(20%Imax) 112.21

(30%Imax) 168.316

(40%Imax) 224.421

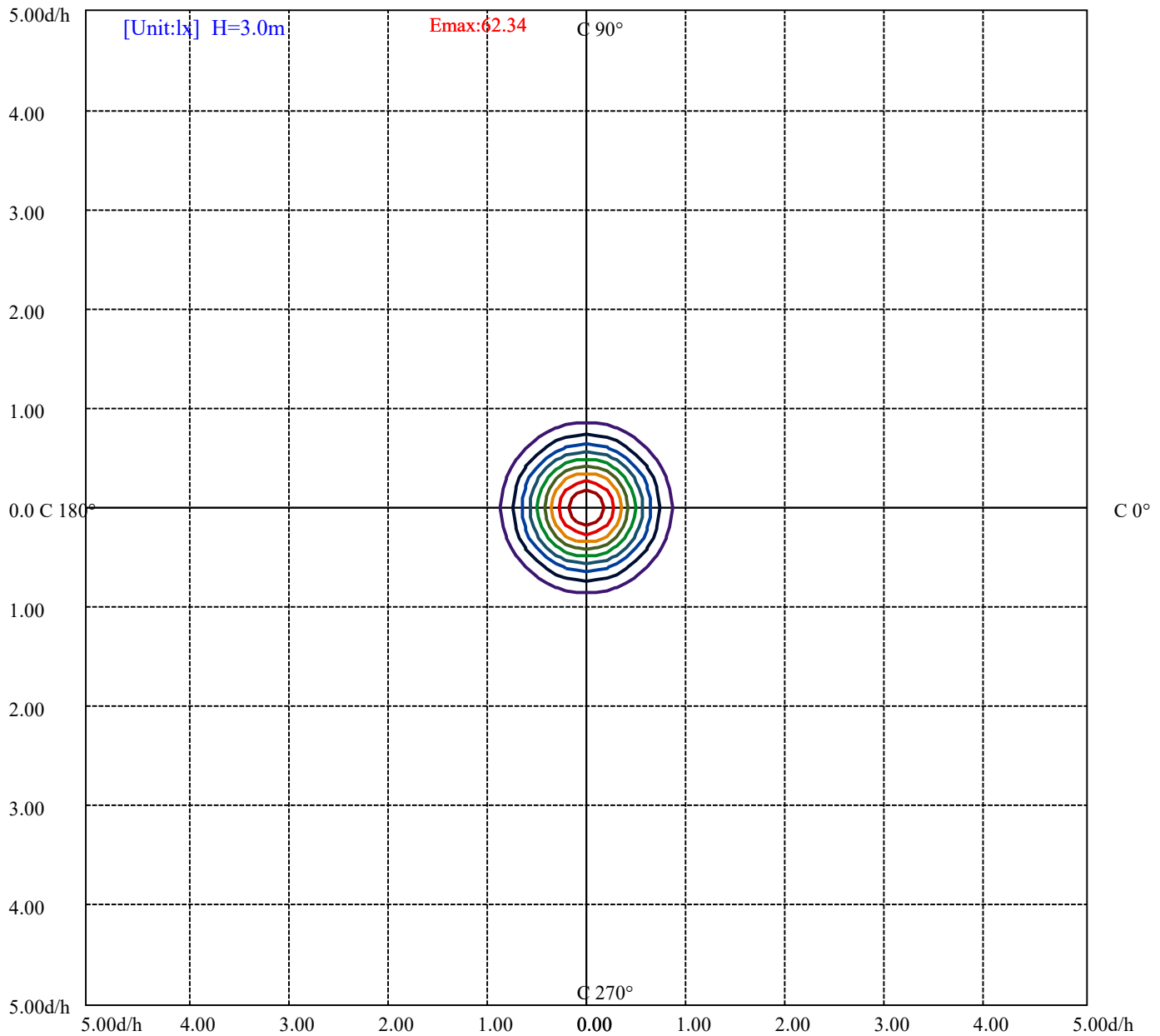
(50%Imax) 280.526

(60%Imax) 336.631

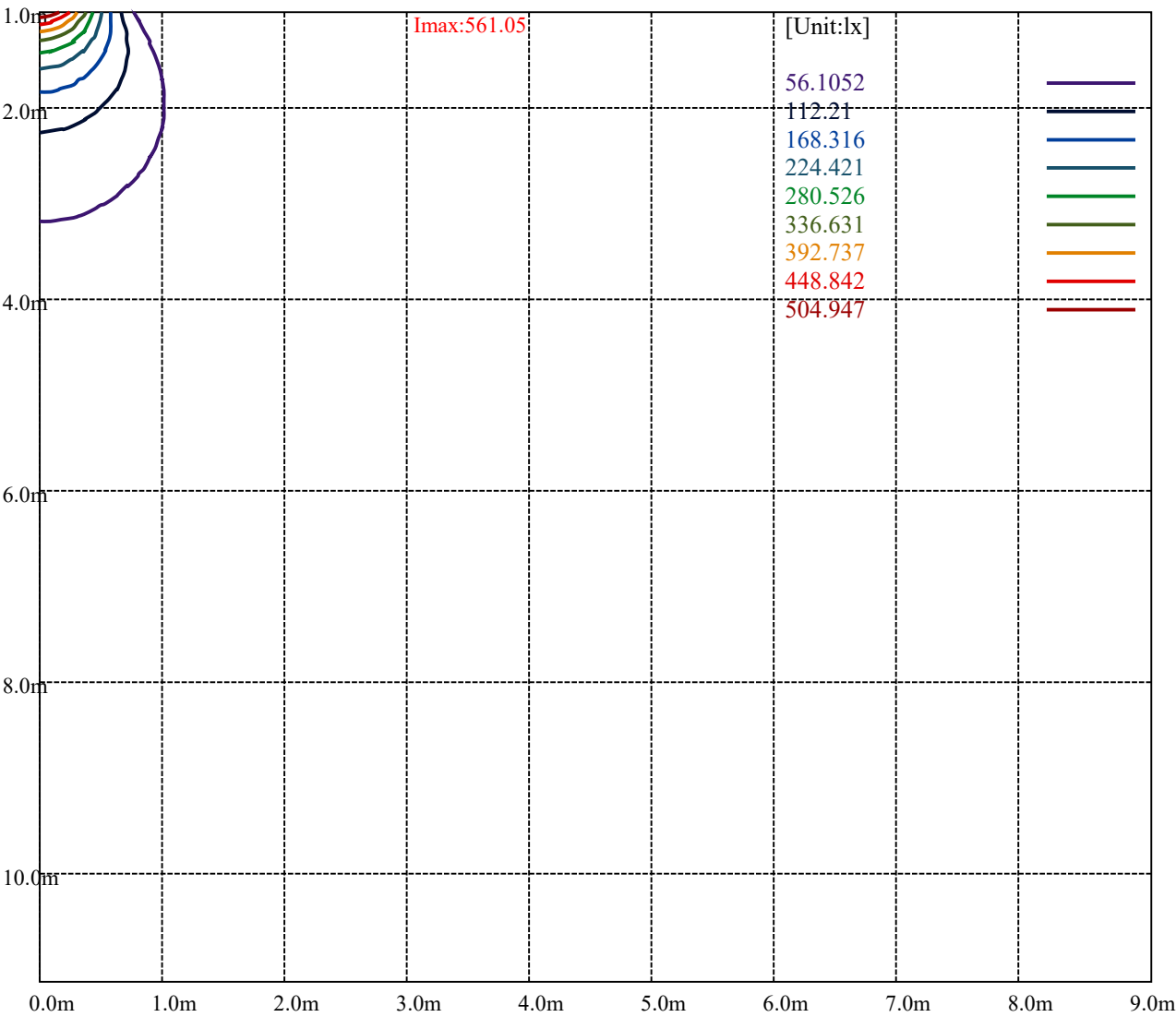
(70%Imax) 392.737

(80%Imax) 448.842

(90%Imax) 504.947



(10%Emax) 6.233912	—
(20%Emax) 12.46778	—
(30%Emax) 18.70178	—
(40%Emax) 24.93567	—
(50%Emax) 31.16956	—
(60%Emax) 37.40345	—
(70%Emax) 43.63733	—
(80%Emax) 49.87133	—
(90%Emax) 56.10522	—



Luminance Table

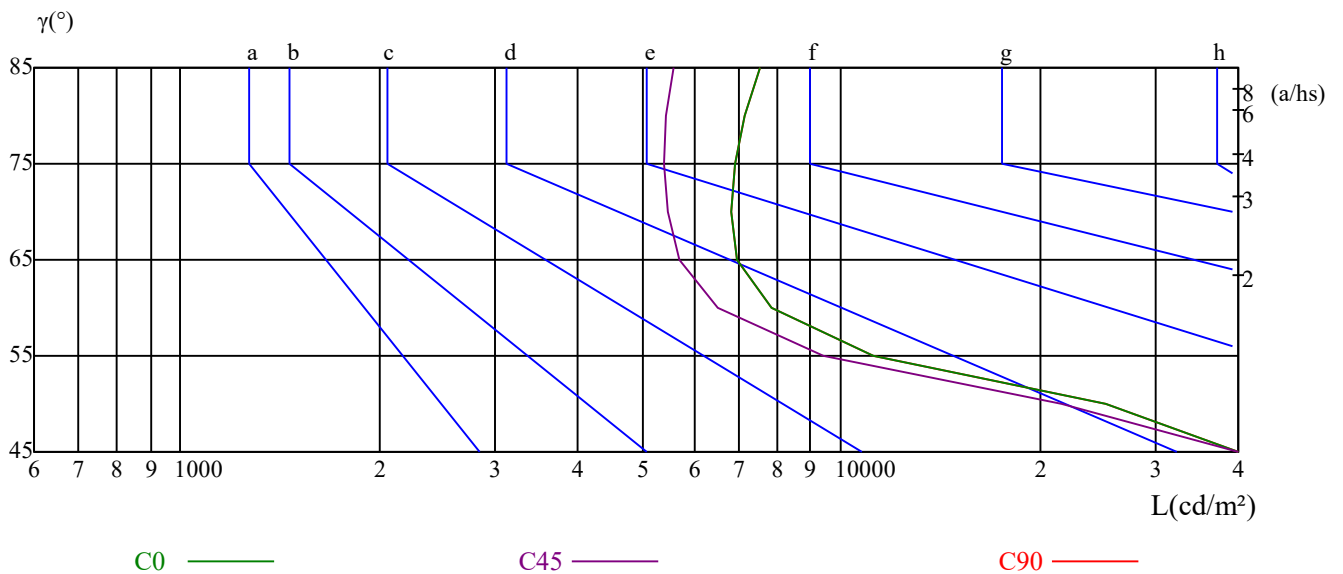
γ	45	50	55	60	65	70	75	80	85
C0	78132	25178	11170	7836	6986	6839	6935	7161	7563
C45	67966	21580	9426	6503	5693	5463	5414	5443	5566
C90	78132	25178	11170	7836	6986	6839	6935	7161	7563

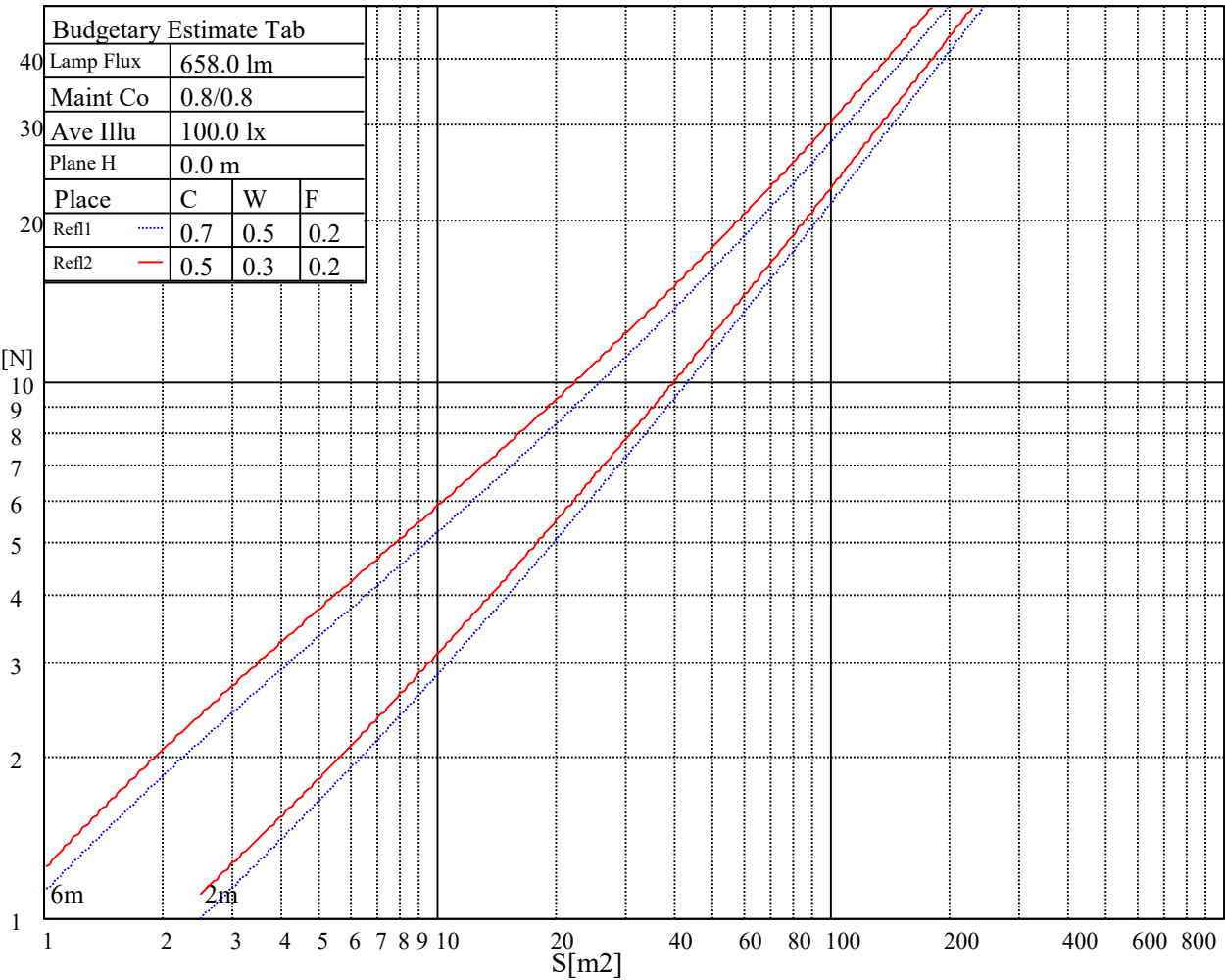
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
15453	15453	15453	21564	21564	21564	56423	56423	56423

Glare Table

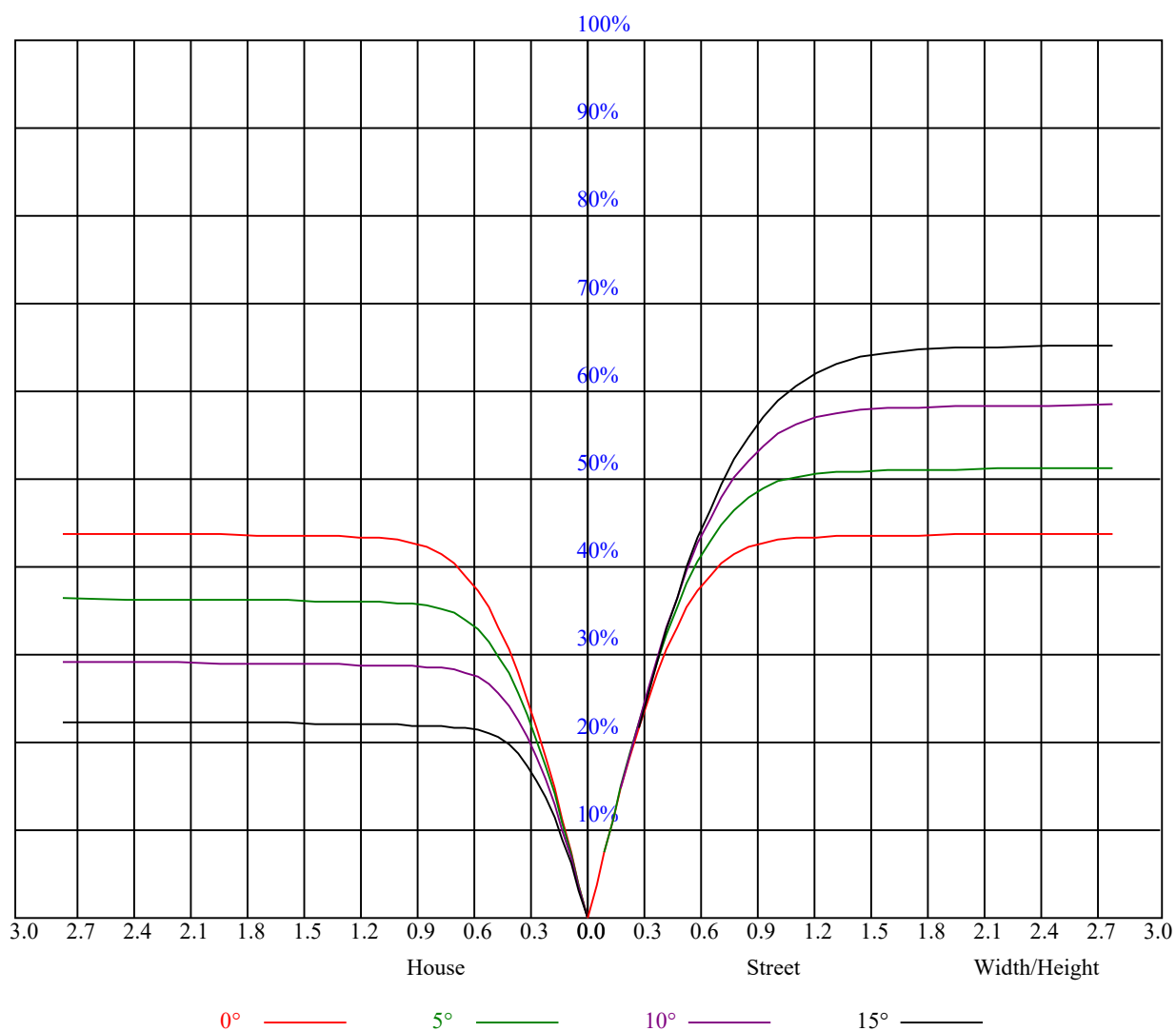
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

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 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	0.89
1	0.97	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.84	0.81	0.79	0.81	0.79	0.78	0.76
3	0.85	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.72	0.71
4	0.79	0.74	0.71	0.78	0.74	0.70	0.76	0.72	0.69	0.75	0.71	0.69	0.73	0.70	0.68	0.66
5	0.74	0.69	0.66	0.74	0.69	0.65	0.72	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.63	0.62
6	0.70	0.65	0.61	0.69	0.64	0.61	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.58
7	0.66	0.61	0.57	0.65	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.55
8	0.62	0.57	0.54	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.52
9	0.59	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.49
10	0.56	0.51	0.48	0.56	0.51	0.48	0.55	0.51	0.47	0.54	0.50	0.47	0.54	0.50	0.47	0.46



Nata 1679-S

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	561.13	562.02	545.83	514.94	472.00	407.09	324.17	219.95	123.60		
45.0	562.79	557.06	528.49	495.56	456.53	400.32	336.89	242.58	134.01		
90.0	559.54	552.11	526.56	490.72	443.48	391.45	327.15	232.67	120.30		
135.0	560.75	551.11	532.51	491.10	450.25	398.88	325.77	241.70	146.12		
180.0	561.13	550.01	521.00	488.68	450.64	388.20	314.10	221.05	127.07		
225.0	562.79	559.92	533.06	495.12	456.47	406.70	343.39	254.36	150.41		
270.0	559.54	560.42	542.69	514.23	473.15	418.10	354.51	265.98	154.38		
315.0	560.75	559.70	541.15	510.43	469.41	396.79	319.66	214.44	110.55		
360.0	561.13	562.02	545.83	514.94	472.00	407.09	324.17	219.95	123.60		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	36.61	10.57	5.12	3.85	3.36	3.08	2.92	2.75	2.59		
45.0	44.49	11.34	5.12	3.80	3.36	3.14	2.92	2.75	2.59		
90.0	38.87	12.88	5.29	3.85	3.36	3.14	2.92	2.75	2.59		
135.0	57.37	19.99	8.04	4.57	3.52	3.19	2.97	2.75	2.53		
180.0	53.02	19.05	8.26	4.73	3.74	3.30	3.03	2.81	2.59		
225.0	49.50	16.41	6.88	4.35	3.63	3.25	3.03	2.81	2.64		
270.0	55.06	14.65	5.51	4.02	3.47	3.19	3.03	2.86	2.75		
315.0	31.05	9.74	4.79	3.63	3.19	2.97	2.81	2.64	2.53		
360.0	36.61	10.57	5.12	3.85	3.36	3.08	2.92	2.75	2.59		
C/γ(°)	90.0										
0.0	2.31										
45.0	2.26										
90.0	2.26										
135.0	2.37										
180.0	2.37										
225.0	2.37										
270.0	2.37										
315.0	2.31										
360.0	2.31										