
Nata

Client:

LumCAT: 2-1680-M2

Luminaire: 92.70.125.00+92.70.152.00

Report No: 200915-B001

Voltage(V): 17.6800

Test No: 200915-C001

Current(A): 0.3430

LampCAT: Vesta DW LES6 Gen2 PD

Power (W): 6.0640

Lamp flux(lm): 573.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 489.53, Efficiency(%): 85.46% , Luminous Efficacy(lm/W): 80.73

Central intensity(cd): 1282.641, Maximum intensity(cd): 1282.641

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=28.0

[C90/270]Total=28.0

Field angle(10%Imax): [C0/180]Total=70.8

[C90/270]Total=70.8

Maximum s/h(1/2): C0_180=0.48 C90_270=0.48

Maximum s/h(1/4): C0_180=0.49 C90_270=0.49

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.46%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.550%

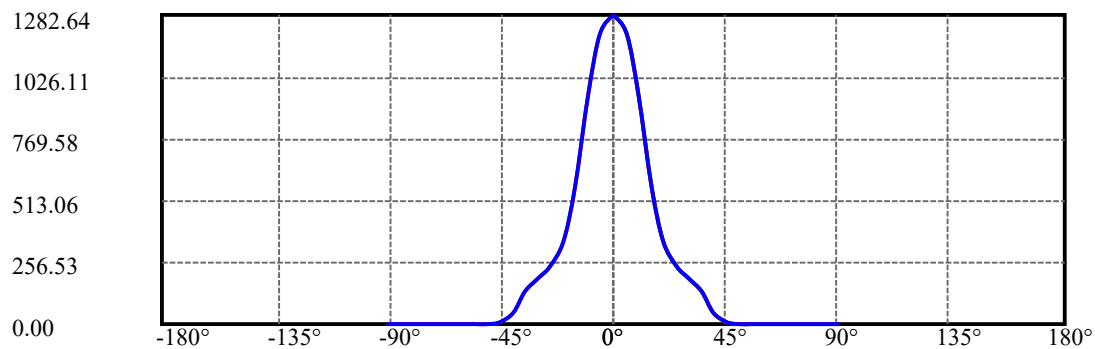
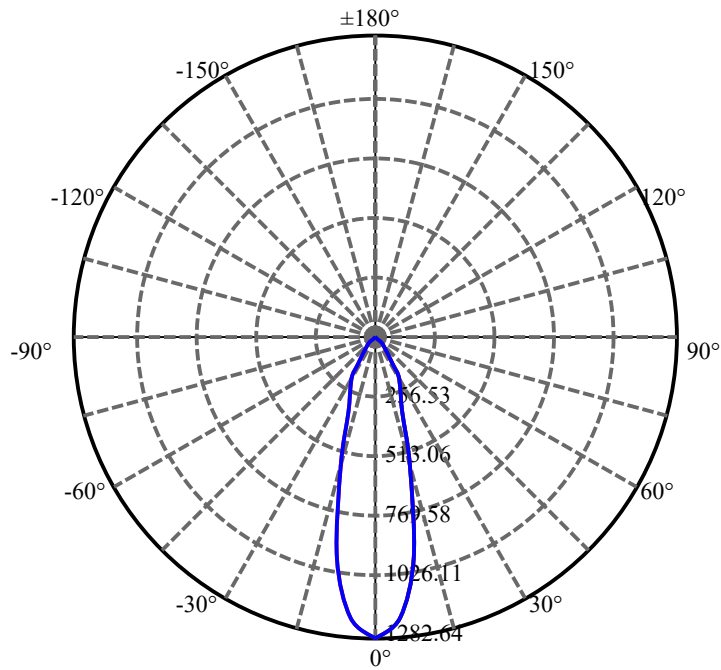
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1282.641	0.000	0	.000%	.000%
5.0	1199.215	29.670	29.67	5.180%	6.061%
10.0	955.378	77.077	106.746	13.456%	21.806%
15.0	566.655	90.286	197.032	15.762%	40.249%
20.0	342.879	74.958	271.991	13.086%	55.562%
25.0	242.508	61.396	333.387	10.719%	68.104%
30.0	189.555	54.678	388.065	9.546%	79.273%
35.0	135.302	47.838	435.903	8.352%	89.045%
40.0	47.102	30.433	466.336	5.313%	95.262%
45.0	10.962	10.751	477.087	1.877%	97.458%
50.0	3.466	2.915	480.002	.509%	98.054%
55.0	2.510	1.300	481.301	.227%	98.319%
60.0	2.370	1.128	482.429	.197%	98.550%
65.0	2.292	1.133	483.563	.198%	98.781%
70.0	2.257	1.152	484.715	.201%	99.017%
75.0	2.236	1.174	485.889	.205%	99.256%
80.0	2.257	1.202	487.091	.210%	99.502%
85.0	2.264	1.228	488.32	.214%	99.753%
90.0	2.152	1.209	489.529	.211%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	388.07	67.73%	79.27%
0-40	466.34	81.38%	95.26%
0-60	482.43	84.19%	98.55%
0-90	488.32	85.22%	99.75%
0-120	488.32	85.22%	99.75%
0-180	489.53	85.43%	100.00%
60-90	7.02	1.22%	1.43%
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%
0-30.37	391.62	68.35%	80.00%

ZONAL LUMEN SUMMARY

0-10	106.75
10-20	165.24
20-30	116.07
30-40	78.27
40-50	13.67
50-60	2.43
60-70	2.29
70-80	2.38
80-90	1.23
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:

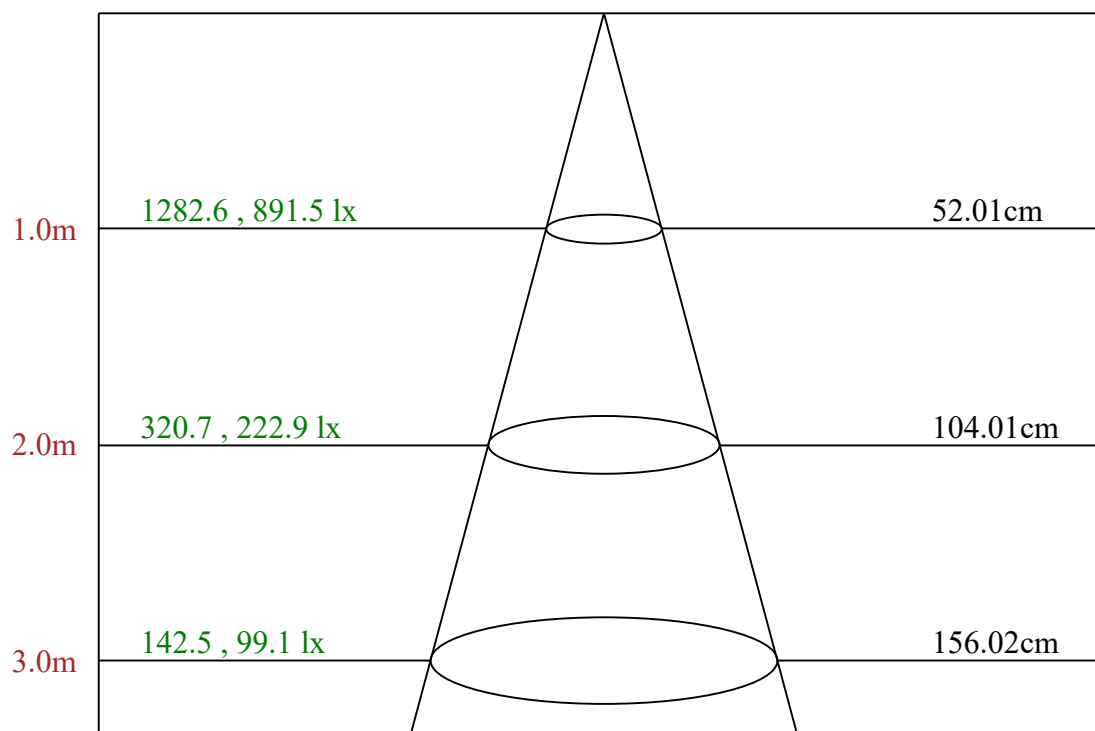
C90/C270:

Field angle(10%Imax):C0/180Left:35.4 Right:35.4

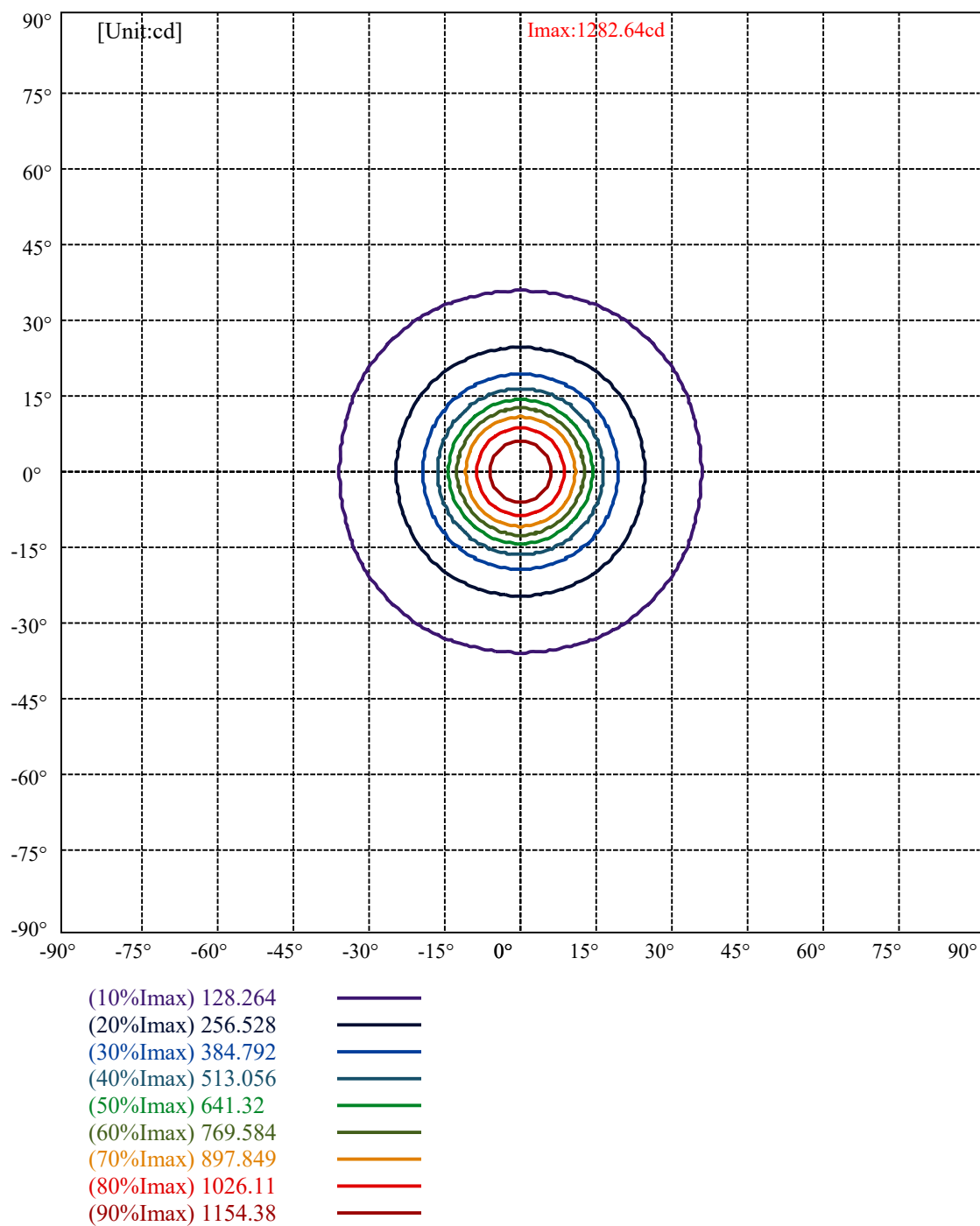
:C90/270Left:35.4 Right:35.4

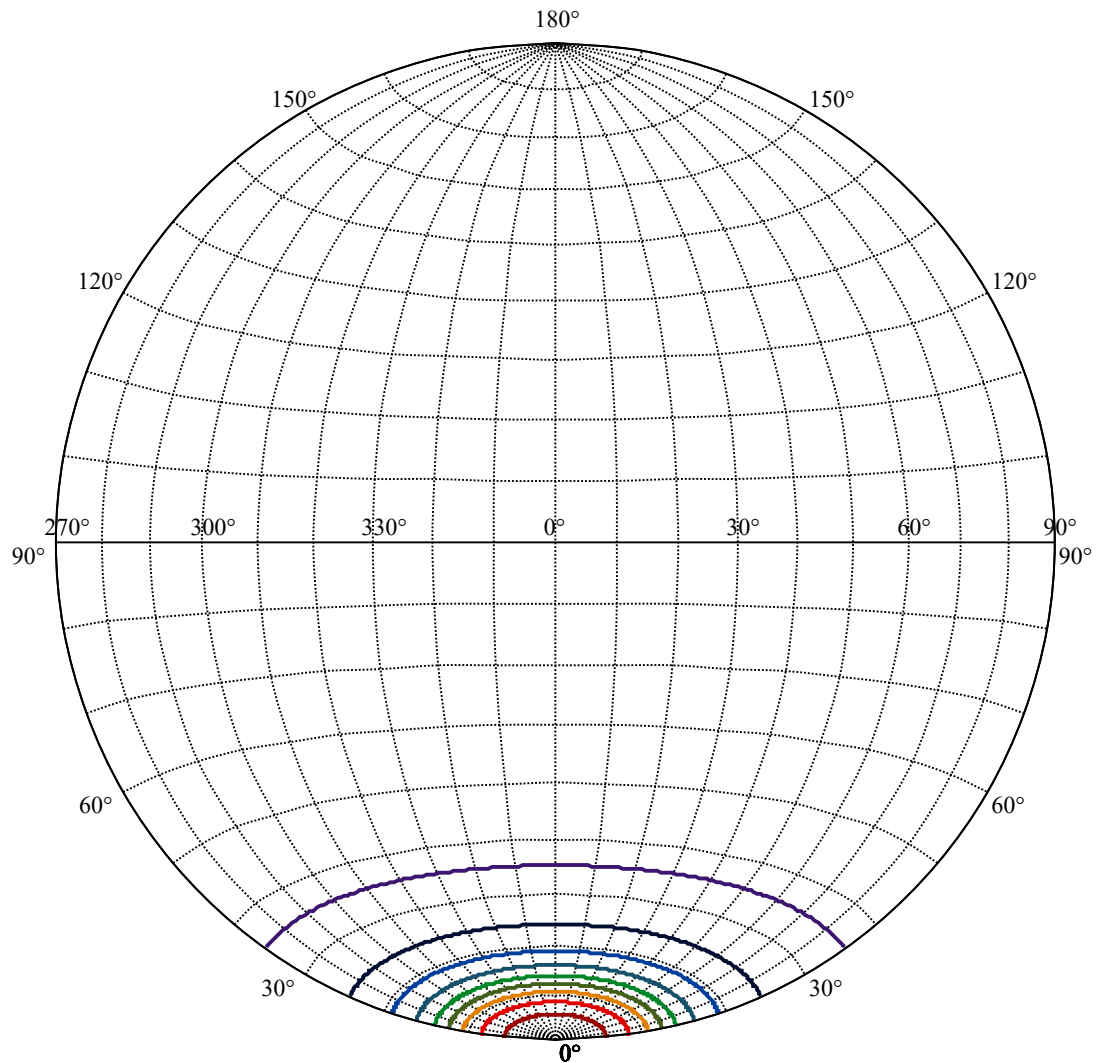
Beam Angle(50%Imax):C0/180Left:14.0 Right:14.0

:C90/270Left:14.0 Right:14.0



Max , Ave Beam angle of C0 plane 29.15





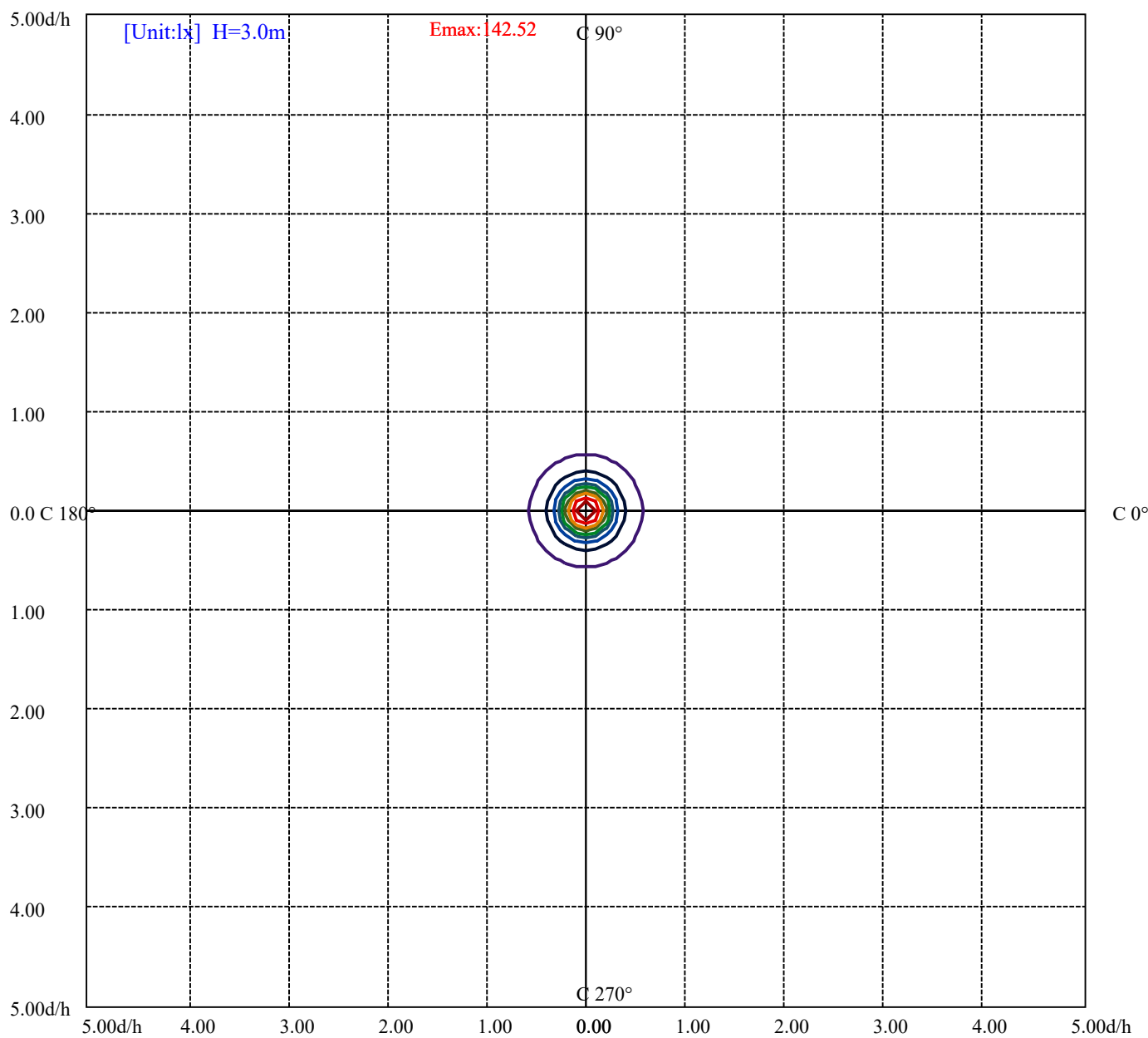
House

[Unit:cd]

Road

Imax:1282.64

(10%Imax)	128.264	—
(20%Imax)	256.528	—
(30%Imax)	384.792	—
(40%Imax)	513.056	—
(50%Imax)	641.32	—
(60%Imax)	769.584	—
(70%Imax)	897.849	—
(80%Imax)	1026.11	—
(90%Imax)	1154.38	—



(10%Emax)	14.25156	
(20%Emax)	28.50311	
(30%Emax)	42.75455	
(40%Emax)	57.00611	
(50%Emax)	71.25766	
(60%Emax)	85.50922	
(70%Emax)	99.76077	
(80%Emax)	114.0122	
(90%Emax)	128.2633	

Luminance Table

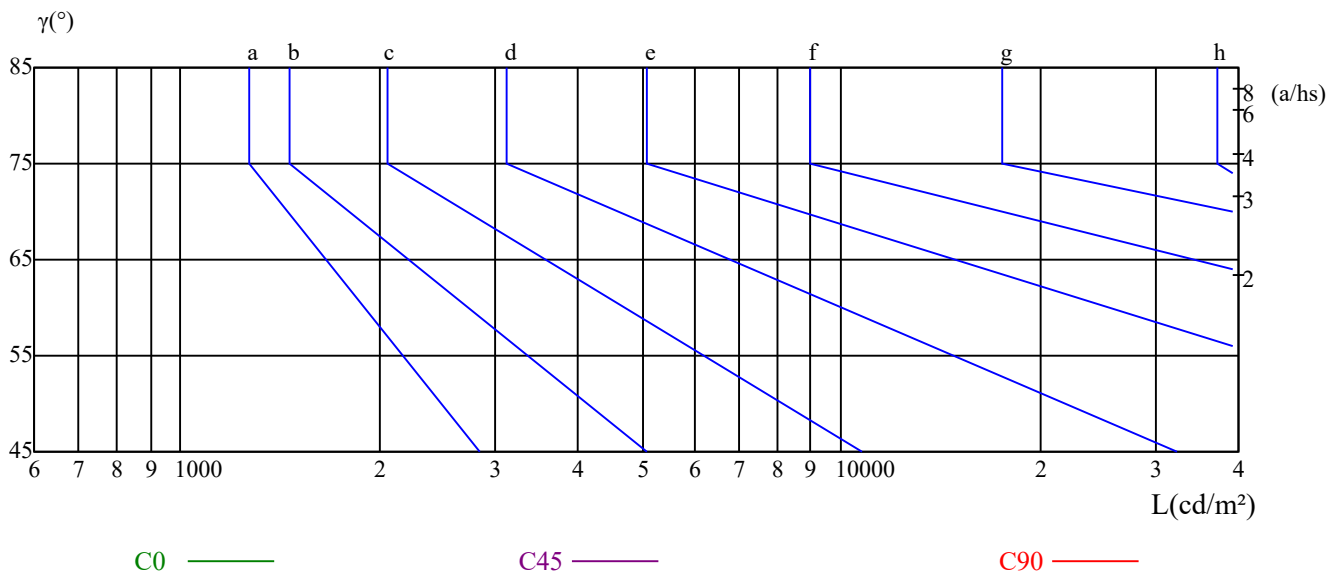
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

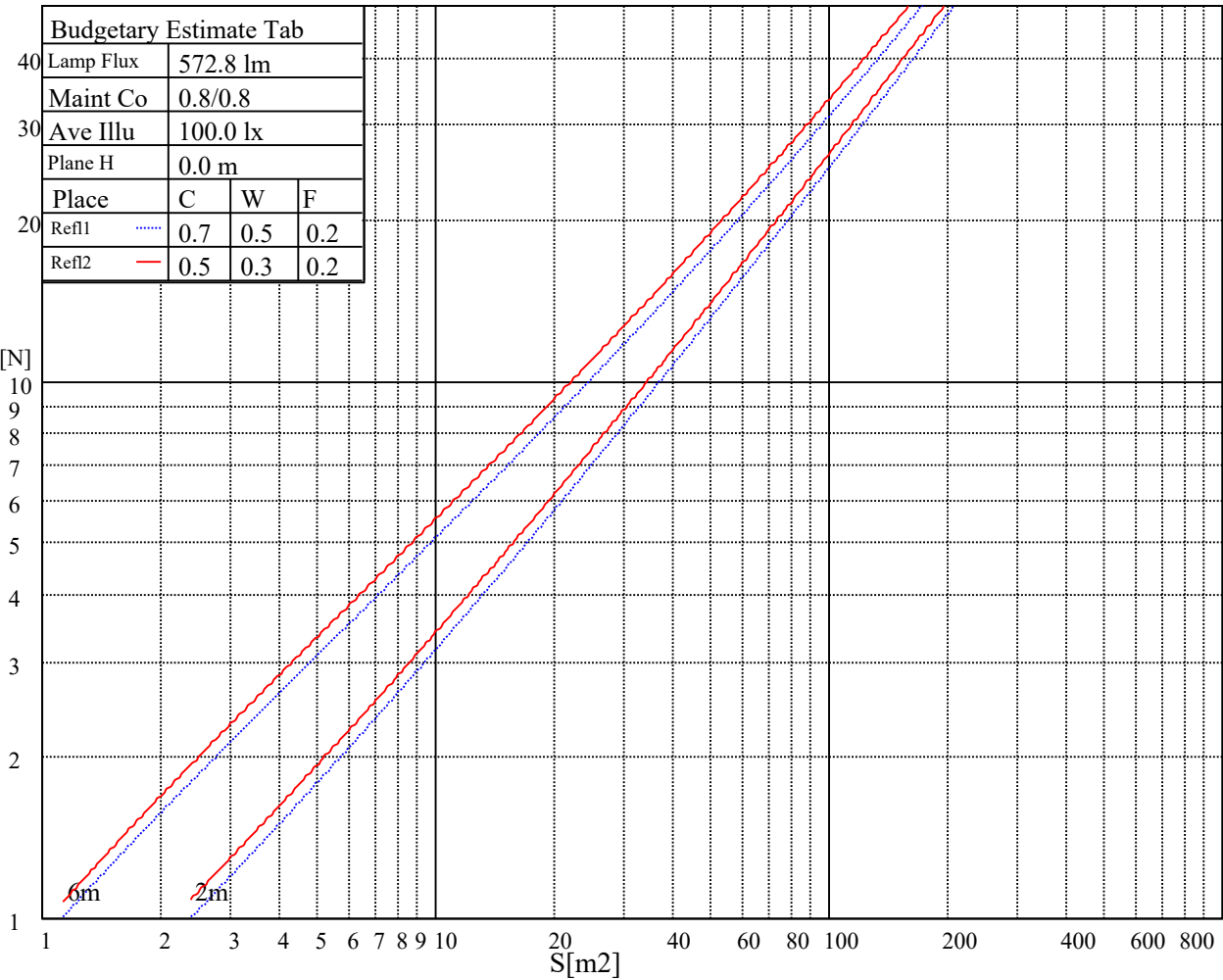
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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	1.02	1.02	1.02	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.85
1	0.95	0.93	0.91	0.93	0.91	0.90	0.90	0.88	0.87	0.87	0.86	0.85	0.84	0.83	0.82	0.81
2	0.89	0.86	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.79	0.80	0.79	0.77	0.76
3	0.84	0.80	0.77	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.76	0.74	0.77	0.75	0.73	0.72
4	0.80	0.75	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.68
5	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
6	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
7	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
8	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
9	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.54
10	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.58	0.55	0.52	0.51

Nata 2-1680-M2

Intensity data(cd)										Appendix Page: 12 Total:12	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1284.19	1227.38	912.94	529.31	318.38	227.42	183.43	120.88	31.50		
45.0	1279.69	1222.31	986.63	570.94	338.63	241.82	191.31	136.35	41.85		
90.0	1285.88	1190.25	951.86	582.98	349.37	245.93	195.98	149.79	48.94		
135.0	1280.81	1274.63	1096.88	704.25	414.56	284.06	205.14	162.11	82.57		
180.0	1284.19	1253.25	1038.15	627.47	368.66	249.30	197.49	149.96	64.74		
225.0	1279.69	1115.89	934.20	545.51	333.06	239.85	188.94	136.46	43.54		
270.0	1285.88	1198.13	918.00	528.75	327.38	234.84	182.14	127.29	40.27		
315.0	1280.81	1111.89	804.38	444.04	293.01	216.84	172.01	99.56	23.40		
360.0	1284.19	1227.38	912.94	529.31	318.38	227.42	183.43	120.88	31.50		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	8.38	2.87	2.42	2.31	2.25	2.25	2.19	2.25	2.31		
45.0	10.13	3.26	2.53	2.42	2.31	2.31	2.31	2.31	2.36		
90.0	11.76	3.49	2.59	2.42	2.31	2.25	2.25	2.31	2.36		
135.0	17.32	5.46	2.64	2.36	2.31	2.25	2.19	2.19	2.19		
180.0	13.61	3.71	2.42	2.36	2.25	2.19	2.14	2.19	2.14		
225.0	10.74	3.15	2.53	2.42	2.36	2.31	2.36	2.36	2.19		
270.0	9.62	3.04	2.53	2.36	2.31	2.25	2.25	2.25	2.25		
315.0	6.13	2.76	2.42	2.31	2.25	2.25	2.19	2.19	2.31		
360.0	8.38	2.87	2.42	2.31	2.25	2.25	2.19	2.25	2.31		
C/γ(°)	90.0										
0.0	2.14										
45.0	2.19										
90.0	2.14										
135.0	2.14										
180.0	2.14										
225.0	2.19										
270.0	2.14										
315.0	2.14										
360.0	2.14										