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## Nata

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LumCAT: 2-1682-M  
Luminaire: 92.70.127.00  
Report No: NT2017081407  
Test No: GC2017081407  
LampCAT: CREE CXA1512  
Lamp flux(lm): 1330.0  
Number of Lamps: 1  
Length(mm): 70  
Phm Type: C

Voltage(V): 37.4000  
Current(A): 0.3000  
Power (W): 11.2200  
PF: 0.0000  
Ballast type: DC  
Width(mm): 70  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 1208.04  
Efficiency(%): 90.83%  
Lumens(lm)/Power(W): 107.67  
Central intensity(cd): 2630.651  
Maximum intensity(cd): 2630.651  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=36.4  
                                  [C90/270]Total=36.4  
Field angle(10%Imax): [C0/180]Total=68.6  
                                  [C90/270]Total=68.6  
Maximum s/h(1/2): C0\_180=0.60 C90\_270=0.60  
Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 90.83%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.667%

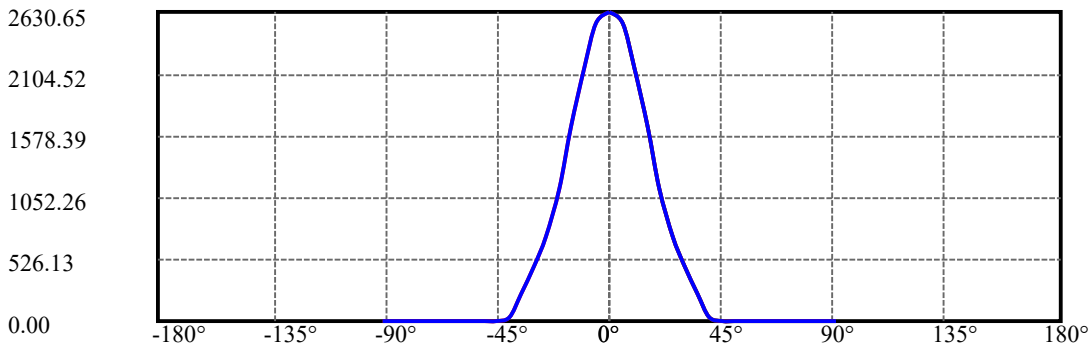
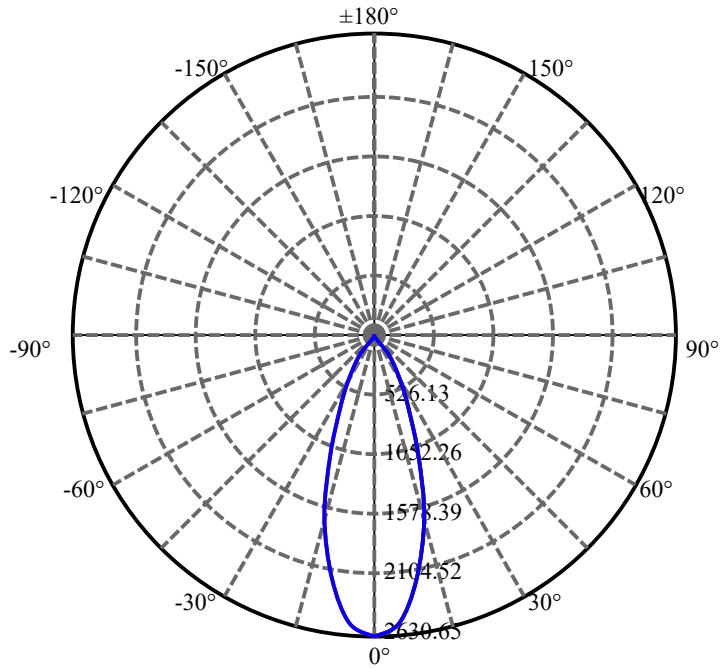
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2630.651	0.000	0	.000%	.000%
5.0	2524.496	61.628	61.628	4.634%	5.101%
10.0	2160.047	167.581	229.209	12.600%	18.974%
15.0	1654.174	226.257	455.466	17.012%	37.703%
20.0	1127.293	229.232	684.698	17.235%	56.678%
25.0	712.904	193.003	877.701	14.511%	72.655%
30.0	476.232	150.486	1028.187	11.315%	85.112%
35.0	228.554	103.785	1131.972	7.803%	93.703%
40.0	35.589	44.070	1176.042	3.314%	97.351%
45.0	7.589	7.995	1184.037	.601%	98.013%
50.0	6.122	2.771	1186.807	.208%	98.242%
55.0	5.697	2.570	1189.377	.193%	98.455%
60.0	5.412	2.568	1191.945	.193%	98.667%
65.0	5.252	2.592	1194.538	.195%	98.882%
70.0	5.099	2.621	1197.159	.197%	99.099%
75.0	5.085	2.662	1199.821	.200%	99.319%
80.0	5.050	2.712	1202.533	.204%	99.544%
85.0	5.050	2.745	1205.277	.206%	99.771%
90.0	5.057	2.768	1208.045	.208%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1028.19	77.31%	85.11%
0-40	1176.04	88.42%	97.35%
0-60	1191.95	89.62%	98.67%
0-90	1205.28	90.62%	99.77%
0-120	1205.28	90.62%	99.77%
0-180	1208.04	90.83%	100.00%
60-90	15.90	1.20%	1.32%
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%
0-27.95	966.44	72.66%	80.00%

ZONAL LUMEN SUMMARY

0-10	229.21
10-20	455.49
20-30	343.49
30-40	147.85
40-50	10.77
50-60	5.14
60-70	5.21
70-80	5.37
80-90	2.74
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

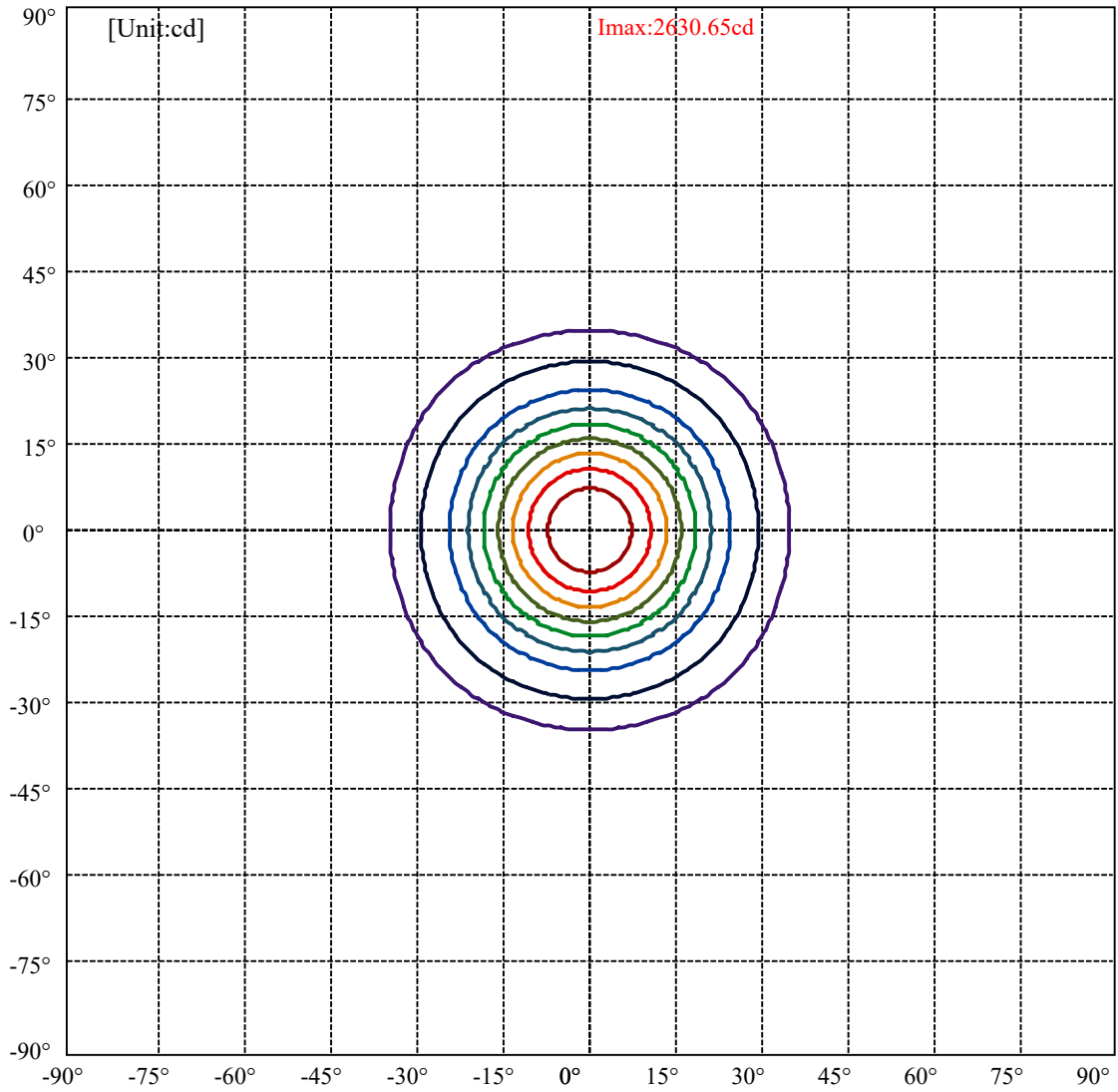


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

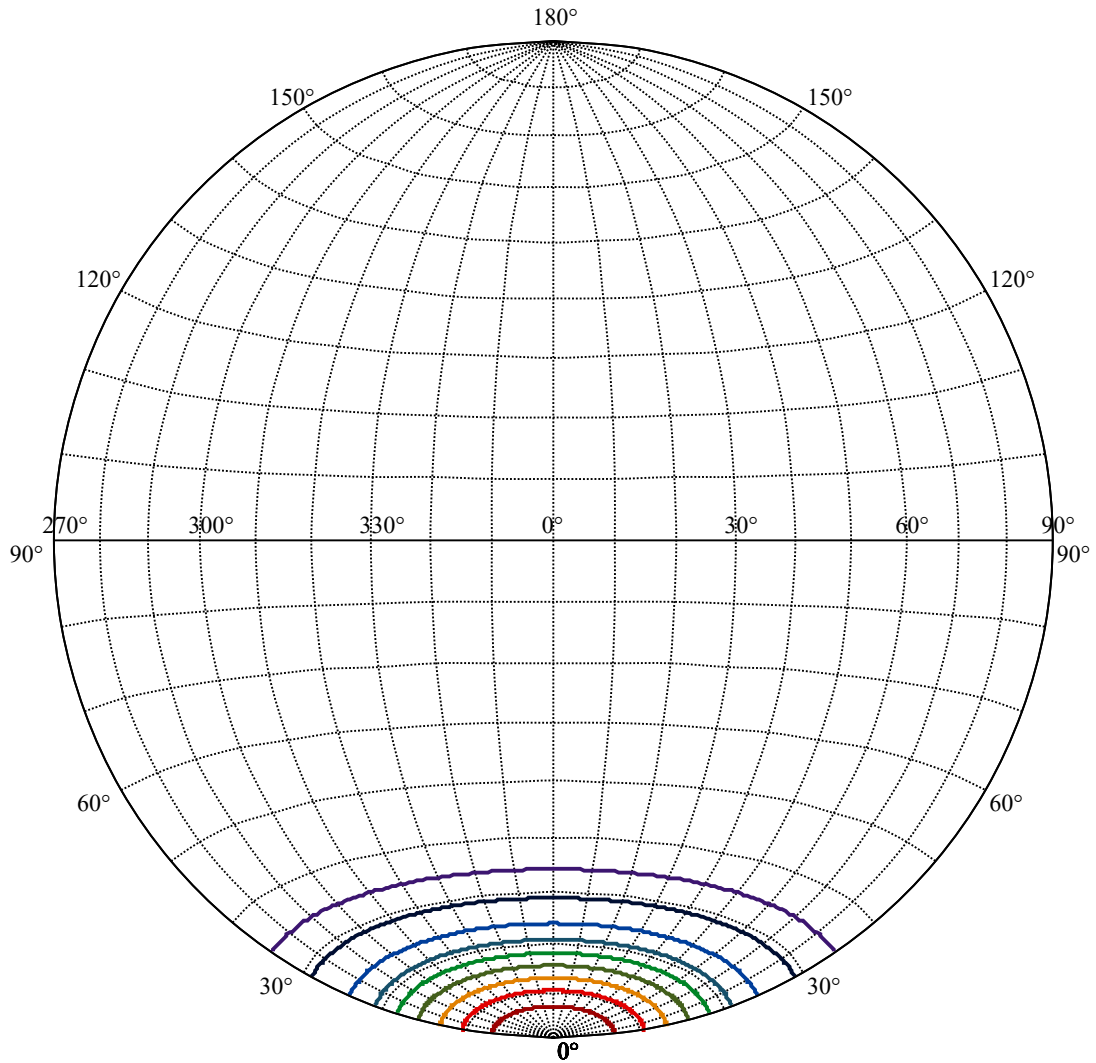
Field angle(10%Imax):C0/180Left:34.3 Right:34.3  
:C90/270Left:34.3 Right:34.3

Beam Angle(50%Imax):C0/180Left:18.2 Right:18.2  
:C90/270Left:18.2 Right:18.2





(10%Imax) 263.065	—
(20%Imax) 526.13	—
(30%Imax) 789.195	—
(40%Imax) 1052.26	—
(50%Imax) 1315.33	—
(60%Imax) 1578.39	—
(70%Imax) 1841.46	—
(80%Imax) 2104.52	—
(90%Imax) 2367.59	—



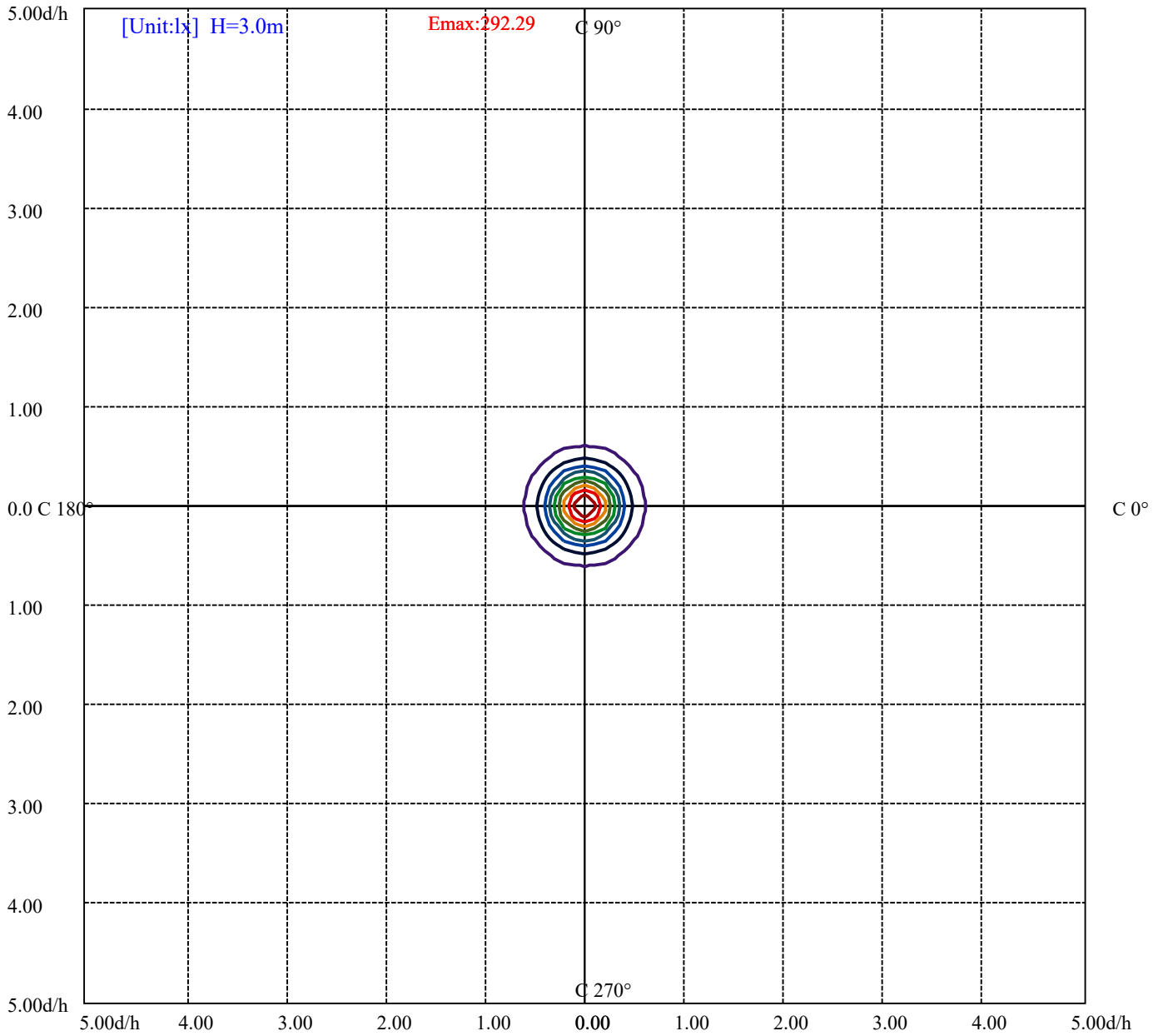
House

[Unit:cd]

Road

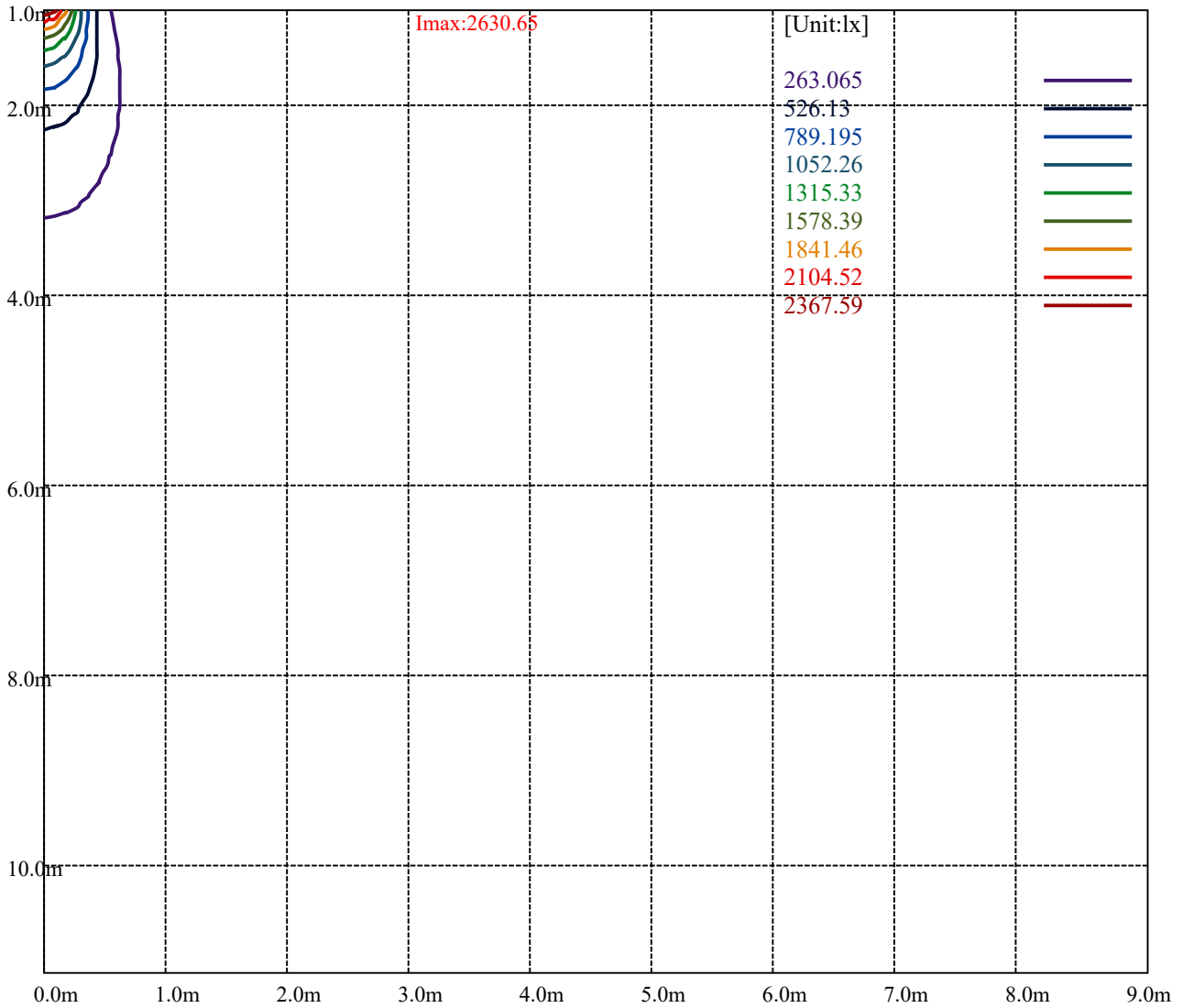
**Imax:2630.65**

(10%Imax) 263.065	—
(20%Imax) 526.13	—
(30%Imax) 789.195	—
(40%Imax) 1052.26	—
(50%Imax) 1315.33	—
(60%Imax) 1578.39	—
(70%Imax) 1841.46	—
(80%Imax) 2104.52	—
(90%Imax) 2367.59	—



- (10%Emax) 29.22944 ————
- (20%Emax) 58.45889 ————
- (30%Emax) 87.68822 ————
- (40%Emax) 116.9178 ————
- (50%Emax) 146.1467 ————
- (60%Emax) 175.3767 ————
- (70%Emax) 204.6055 ————
- (80%Emax) 233.8356 ————
- (90%Emax) 263.0645 ————





Luminance Table

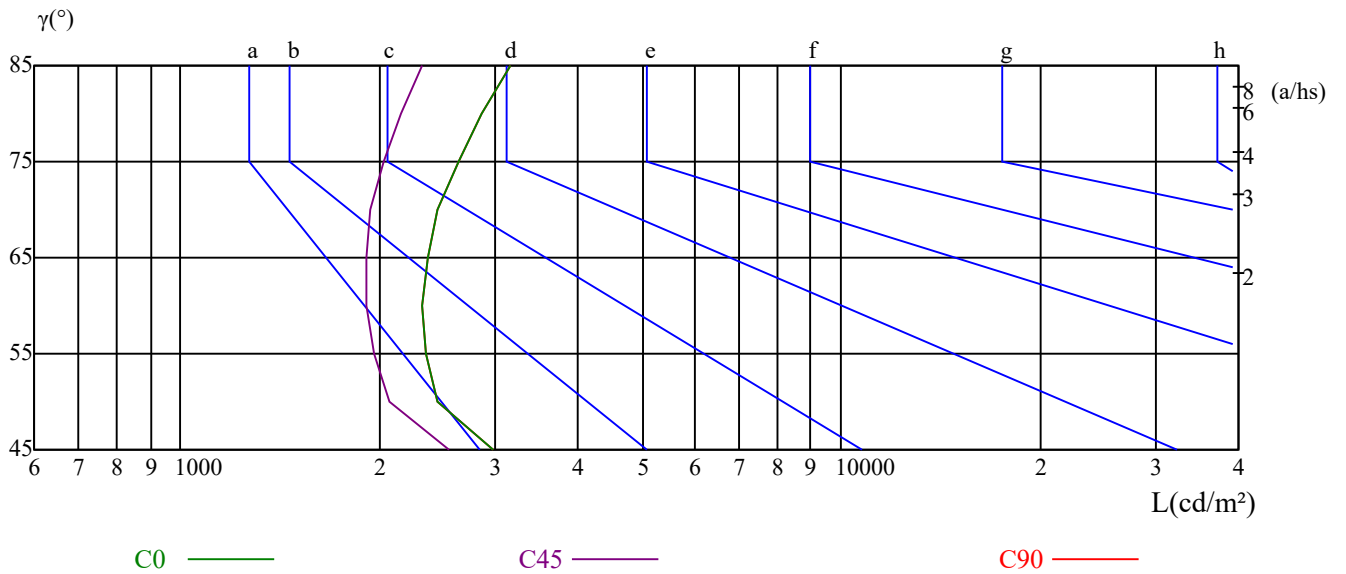
$\gamma$	45	50	55	60	65	70	75	80	85
C0	2966	2449	2352	2327	2375	2451	2630	2850	3162
C45	2554	2077	1964	1911	1916	1939	2036	2152	2318
C90	2966	2449	2352	2327	2375	2451	2630	2850	3162

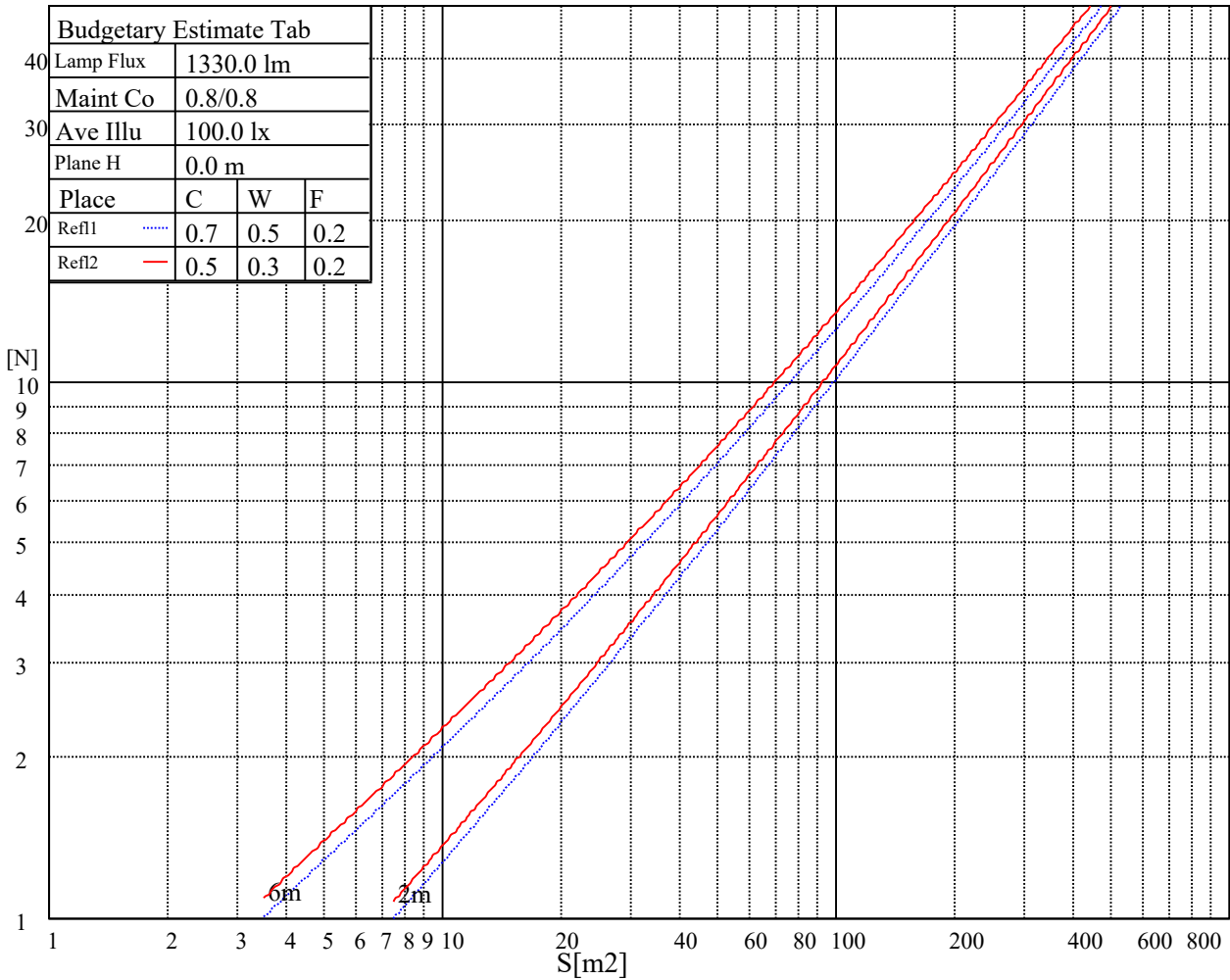
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5626	5626	5626	8894	8894	8894	26232	26232	26232

Glare Table

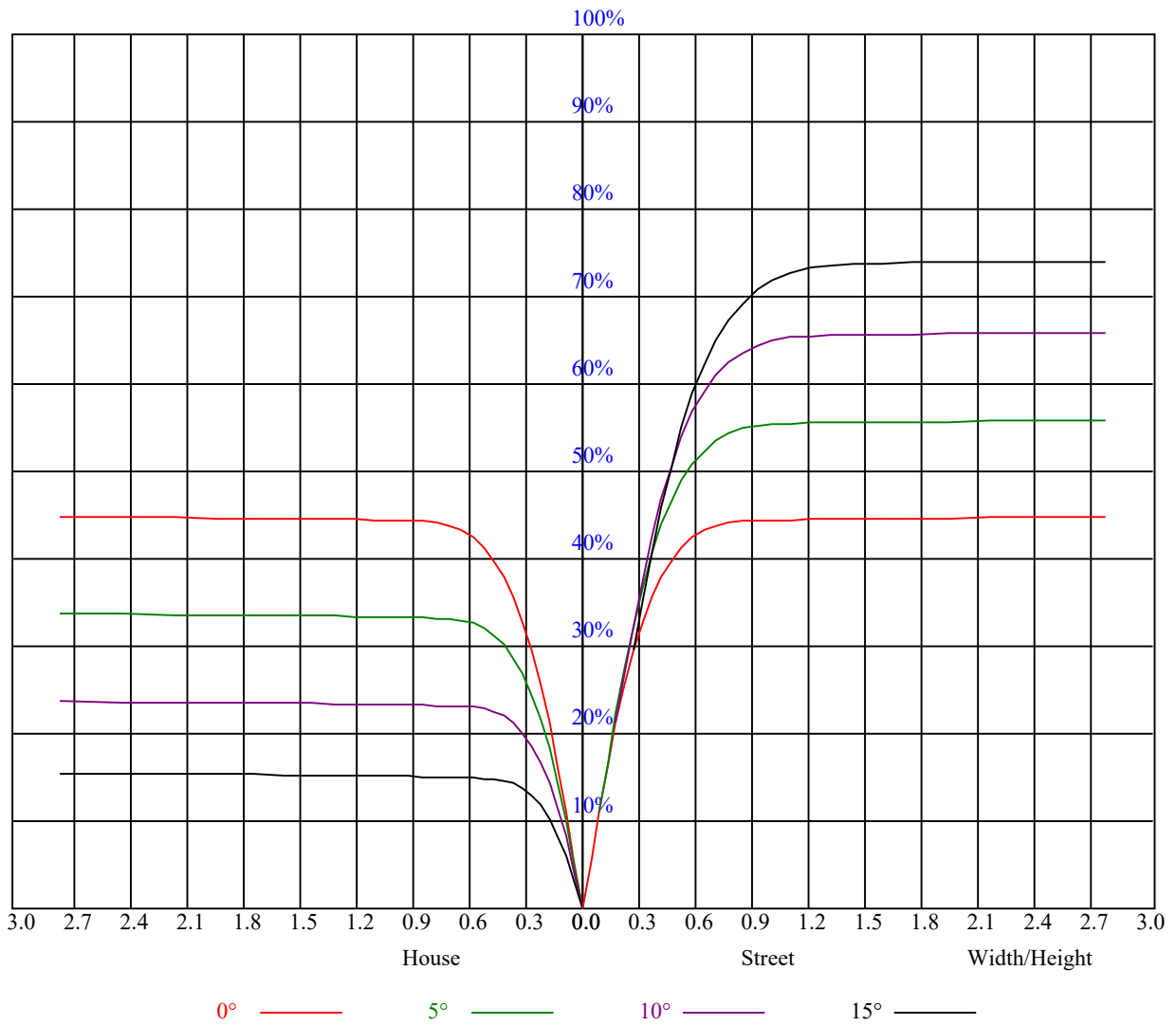
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.01	0.99	0.97	0.99	0.97	0.96	0.96	0.94	0.93	0.92	0.91	0.90	0.89	0.88	0.87	0.86
2	0.95	0.92	0.89	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.83	0.81
3	0.90	0.86	0.83	0.89	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.78	0.77
4	0.85	0.81	0.77	0.84	0.80	0.77	0.82	0.79	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.73
5	0.81	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
6	0.77	0.72	0.69	0.76	0.72	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.73	0.70	0.67	0.66
7	0.73	0.69	0.65	0.73	0.68	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	0.65	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	0.64	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 2-1682-M

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	2623.97	2626.20	2390.24	1914.42	1428.58	896.55	574.88	350.05	106.24
45.0	2631.76	2578.90	2257.23	1756.36	1254.39	789.70	531.47	284.38	50.03
90.0	2626.76	2508.77	2100.29	1597.76	1070.68	684.01	463.47	184.10	19.03
135.0	2640.11	2488.74	2118.66	1600.54	1057.94	680.06	450.22	214.65	19.48
180.0	2623.97	2383.00	1917.75	1401.86	885.70	560.24	358.56	95.50	10.74
225.0	2631.76	2485.96	2054.10	1497.03	1021.71	631.70	415.83	167.34	15.19
270.0	2626.76	2548.29	2203.25	1728.54	1189.27	732.38	510.88	282.15	33.39
315.0	2640.11	2576.11	2238.86	1736.89	1110.08	728.59	504.54	250.27	30.61
360.0	2623.97	2626.20	2390.24	1914.42	1428.58	896.55	574.88	350.05	106.24

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	11.91	6.51	6.01	5.57	5.34	5.12	5.12	5.06	5.01
45.0	8.01	6.40	5.84	5.57	5.34	5.18	5.12	5.06	5.06
90.0	6.79	6.12	5.73	5.45	5.29	5.12	5.06	5.12	5.06
135.0	6.85	6.01	5.62	5.34	5.23	5.06	5.06	5.01	5.01
180.0	6.12	5.79	5.45	5.23	5.18	5.06	5.06	5.06	5.01
225.0	6.40	5.90	5.51	5.34	5.18	5.12	5.12	5.06	5.06
270.0	7.57	6.07	5.68	5.40	5.23	5.06	5.06	5.01	5.12
315.0	7.07	6.18	5.73	5.40	5.23	5.06	5.06	5.01	5.06
360.0	11.91	6.51	6.01	5.57	5.34	5.12	5.12	5.06	5.01

C/γ(°)	90.0
0.0	5.06
45.0	5.06
90.0	5.06
135.0	5.01
180.0	5.06
225.0	5.12
270.0	5.06
315.0	5.01
360.0	5.06