



NATA LIGHTING CO.,LTD.  
www.nata.cn  
Email:info@nata.com  
Tel:+86-750-3770000 Fax:+86-750-3771111  
Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

---

## Nata

---

LumCAT: 2-1674-M  
Luminaire: 92.70.131.00  
Report No: NATA0100  
Test No: GC2018071707  
/ D P S & \$ 7 % 5 , ' \* ( / 8 ; 9 + '  
Lamp flux(lm): 1172.0  
Number of Lamps: 1  
Length(mm): 71  
Phm Type: C  
Voltage(V): 34.2000  
Current(A): 0.3000  
Power (W): 10.2600  
PF: 1.0000  
Ballast type: DC  
Width(mm): 71  
Height(mm): 0

---

## Photometric Results

---

Lumens(lm): 1086.65  
Efficiency(%): 92.72%  
Lumens(lm)/Power(W): 107.31  
Central intensity(cd): 15165.290  
Maximum intensity(cd): 15165.290  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=10.4  
[C90/270]Total=10.4  
Field angle(10%Imax): [C0/180]Total=19.7  
[C90/270]Total=19.7  
Maximum s/h(1/2): C0\_180=0.18 C90\_270=0.18  
Maximum s/h(1/4): C0\_180=0.18 C90\_270=0.18  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 93.94%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.427%

---

Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2018/7/17  
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	15165.285	14.513	14.513	1.238%	1.336%
2.0	13356.820	102.232	116.745	8.723%	10.744%
4.0	10020.747	153.303	270.047	13.080%	24.851%
6.0	5931.157	135.969	406.016	11.601%	37.364%
8.0	3010.897	91.900	497.916	7.841%	45.821%
10.0	1383.492	52.688	550.604	4.496%	50.670%
12.0	816.149	37.215	587.819	3.175%	54.095%
14.0	624.257	33.121	620.94	2.826%	57.143%
16.0	550.605	33.285	654.225	2.840%	60.206%
18.0	505.727	34.274	688.499	2.924%	63.360%
20.0	468.957	35.176	723.675	3.001%	66.597%
22.0	438.263	36.006	759.681	3.072%	69.911%
24.0	413.150	36.854	796.535	3.145%	73.302%
26.0	394.135	37.892	834.427	3.233%	76.789%
28.0	380.130	39.139	873.566	3.339%	80.391%
30.0	368.403	40.398	913.964	3.447%	84.109%
32.0	356.366	41.416	955.38	3.534%	87.920%
34.0	340.400	41.746	997.126	3.562%	91.762%
36.0	276.727	35.673	1032.799	3.044%	95.045%
38.0	165.851	22.394	1055.193	1.911%	97.105%
40.0	49.048	6.914	1062.107	.590%	97.742%
42.0	11.280	1.655	1063.762	.141%	97.894%
44.0	8.919	1.359	1065.121	.116%	98.019%
46.0	7.199	1.136	1066.257	.097%	98.124%
48.0	5.994	0.977	1067.234	.083%	98.213%
50.0	5.382	0.904	1068.138	.077%	98.297%
52.0	5.223	0.903	1069.041	.077%	98.380%
54.0	5.093	0.904	1069.944	.077%	98.463%
56.0	4.976	0.905	1070.849	.077%	98.546%
58.0	4.872	0.906	1071.755	.077%	98.630%
60.0	4.817	0.915	1072.67	.078%	98.714%
62.0	4.762	0.922	1073.592	.079%	98.799%
64.0	4.714	0.929	1074.522	.079%	98.884%
66.0	4.687	0.939	1075.461	.080%	98.971%
68.0	4.652	0.946	1076.407	.081%	99.058%
70.0	4.618	0.952	1077.358	.081%	99.145%
72.0	4.597	0.959	1078.317	.082%	99.233%
74.0	4.590	0.968	1079.285	.083%	99.322%

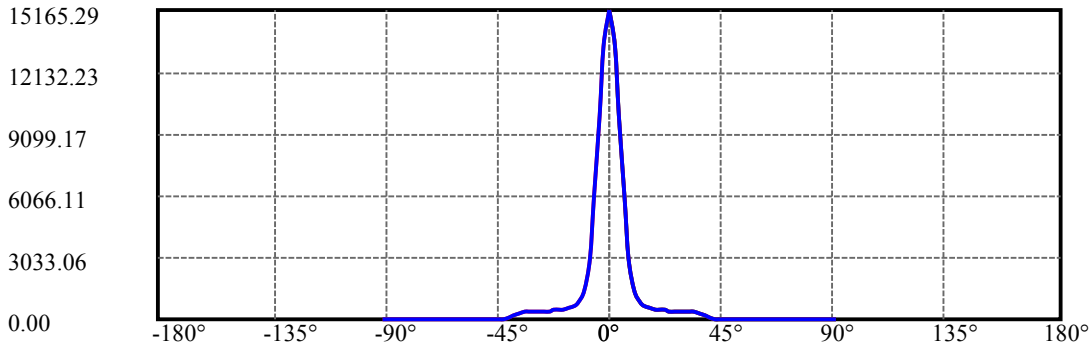
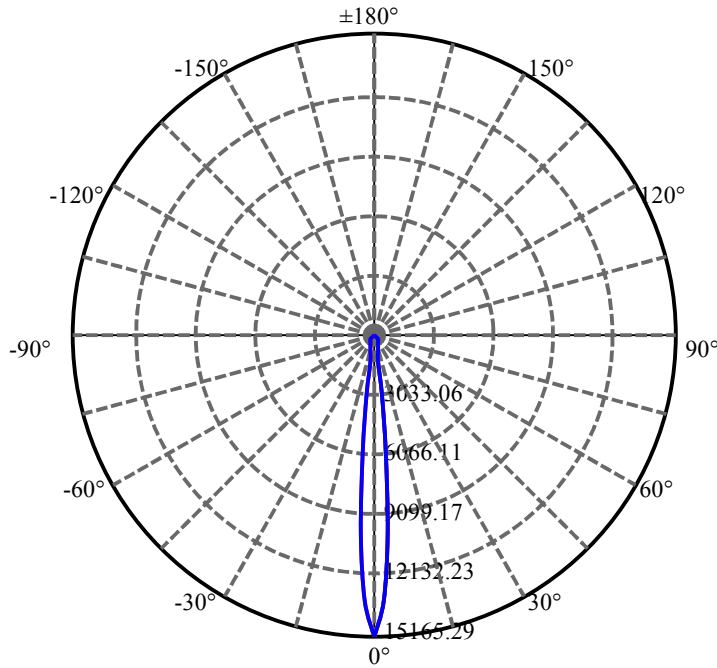
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.577	0.974	1080.259	.083%	99.412%
78.0	4.549	0.976	1081.235	.083%	99.502%
80.0	4.542	0.981	1082.216	.084%	99.592%
82.0	4.522	0.982	1083.198	.084%	99.683%
84.0	4.542	0.991	1084.188	.085%	99.774%
86.0	4.508	0.986	1085.175	.084%	99.864%
88.0	4.480	0.982	1086.157	.084%	99.955%
90.0	4.473	0.491	1086.647	.042%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	913.96	77.98%	84.11%
0-40	1062.11	90.62%	97.74%
0-60	1072.67	91.52%	98.71%
0-90	1086.16	92.68%	99.95%
0-120	1086.16	92.68%	99.95%
0-180	1086.65	92.72%	100.00%
60-90	14.40	1.23%	1.33%
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%
0-27.78	869.32	74.17%	80.00%

## ZONAL LUMEN SUMMARY

0-10	550.60
10-20	173.07
20-30	190.29
30-40	148.14
40-50	6.03
50-60	4.53
60-70	4.69
70-80	4.86
80-90	3.94
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

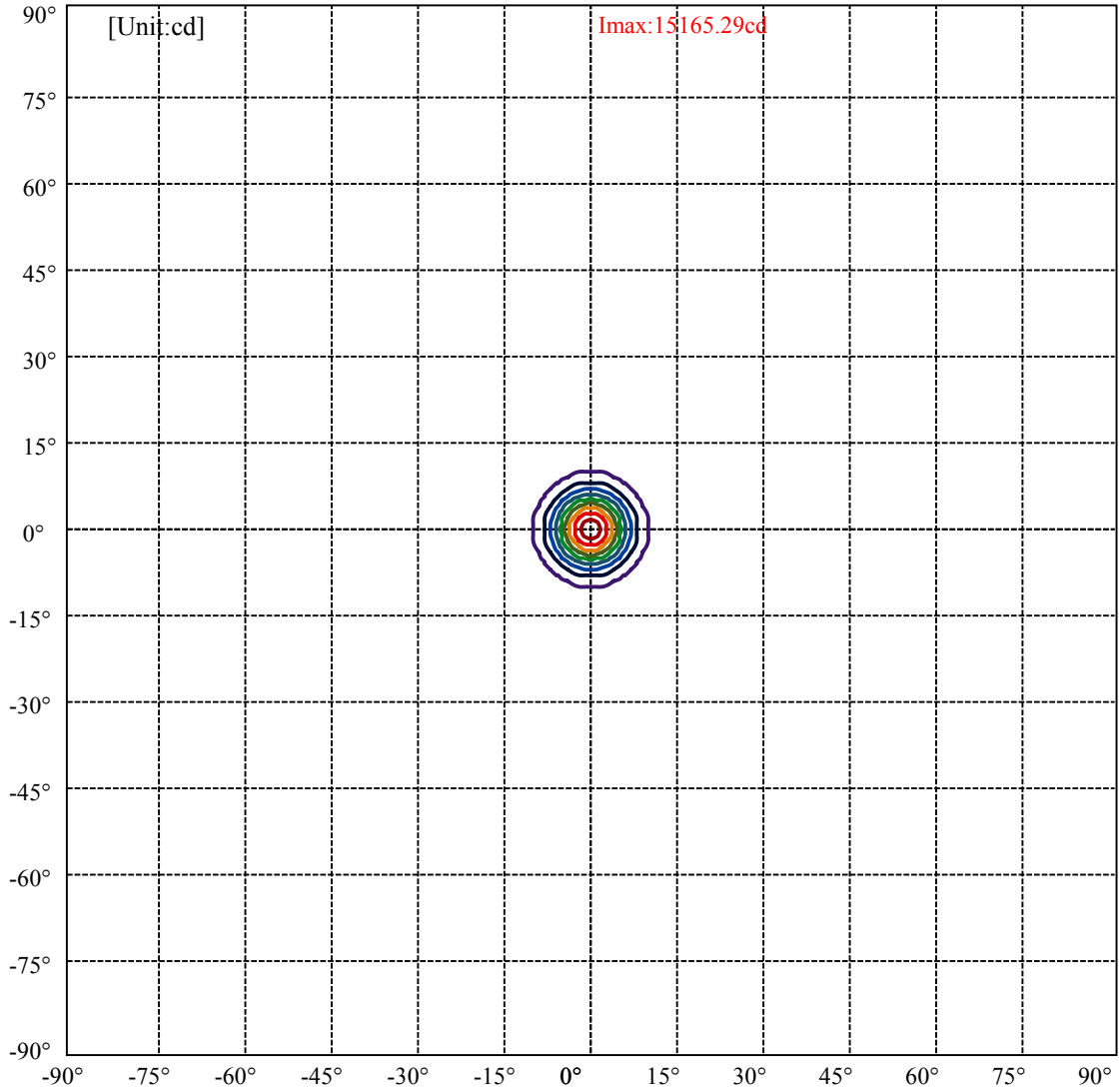


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

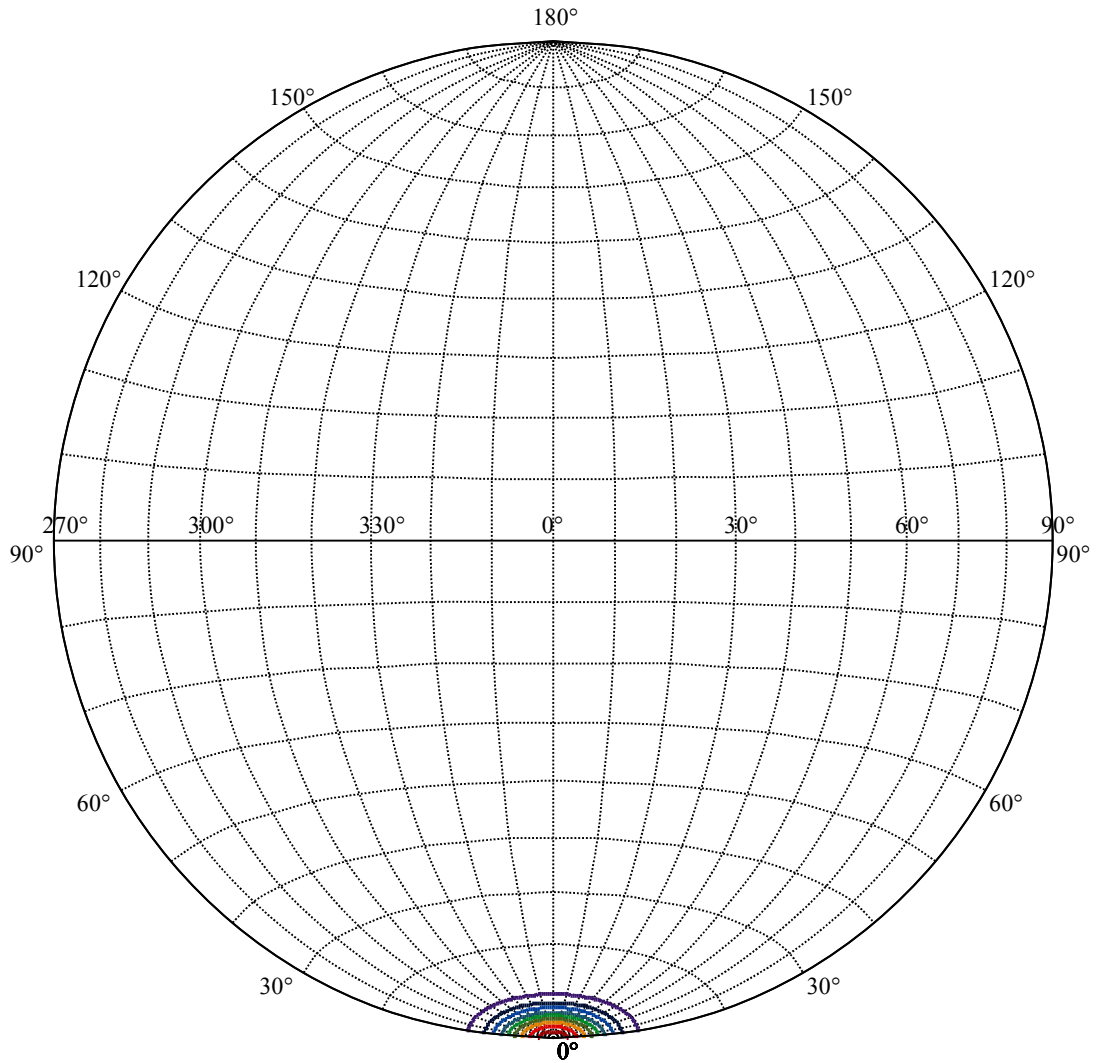
Field angle(10%Imax):C0/180Left:9.8 Right:9.8  
:C90/270Left:9.8 Right:9.8

Beam Angle(50%Imax):C0/180Left:5.2 Right:5.2  
:C90/270Left:5.2 Right:5.2





(10%I <sub>max</sub> ) 1516.53	—
(20%I <sub>max</sub> ) 3033.06	—
(30%I <sub>max</sub> ) 4549.59	—
(40%I <sub>max</sub> ) 6066.11	—
(50%I <sub>max</sub> ) 7582.64	—
(60%I <sub>max</sub> ) 9099.17	—
(70%I <sub>max</sub> ) 10615.7	—
(80%I <sub>max</sub> ) 12132.2	—
(90%I <sub>max</sub> ) 13648.8	—



House

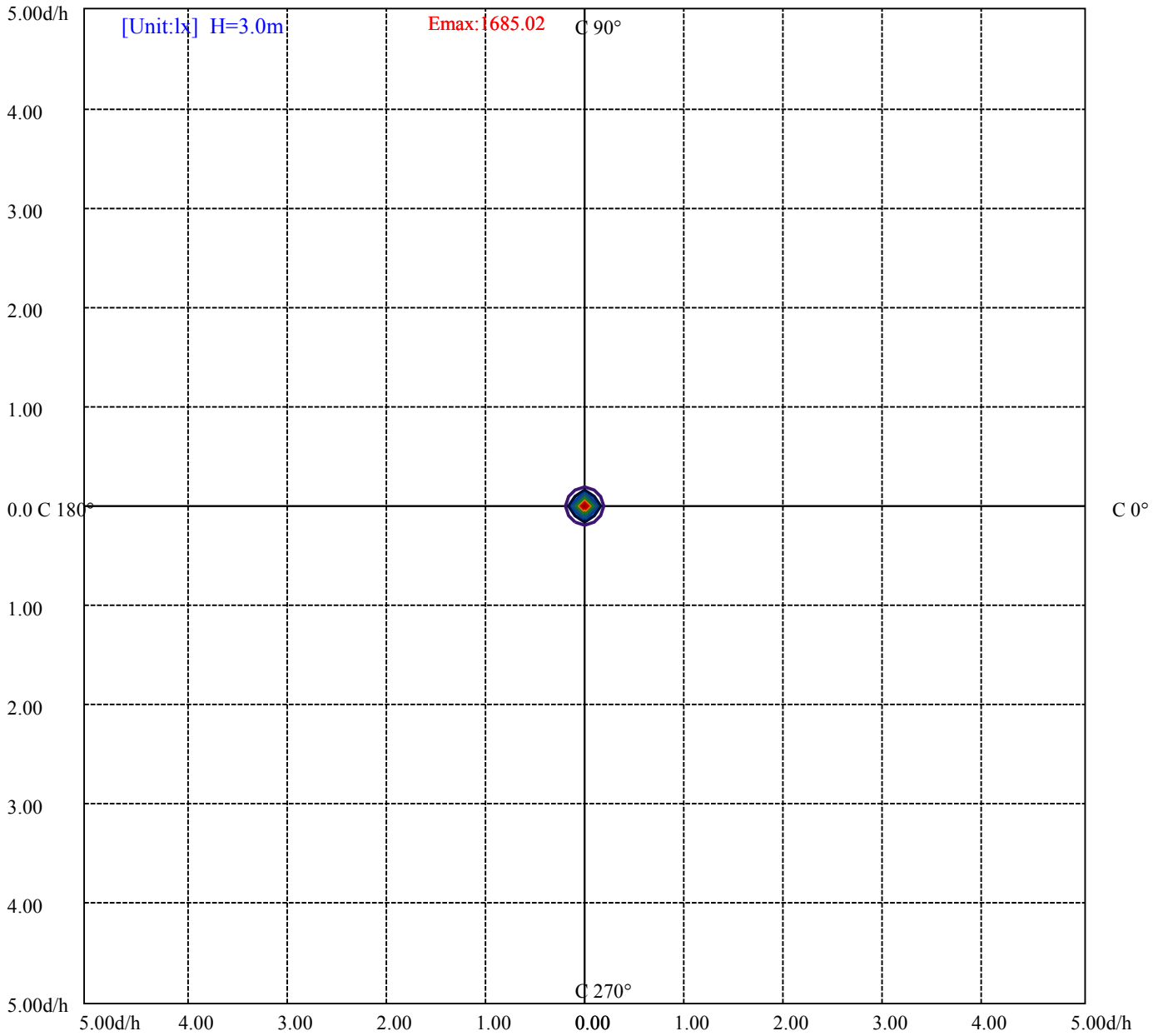
[Unit:cd]

Road

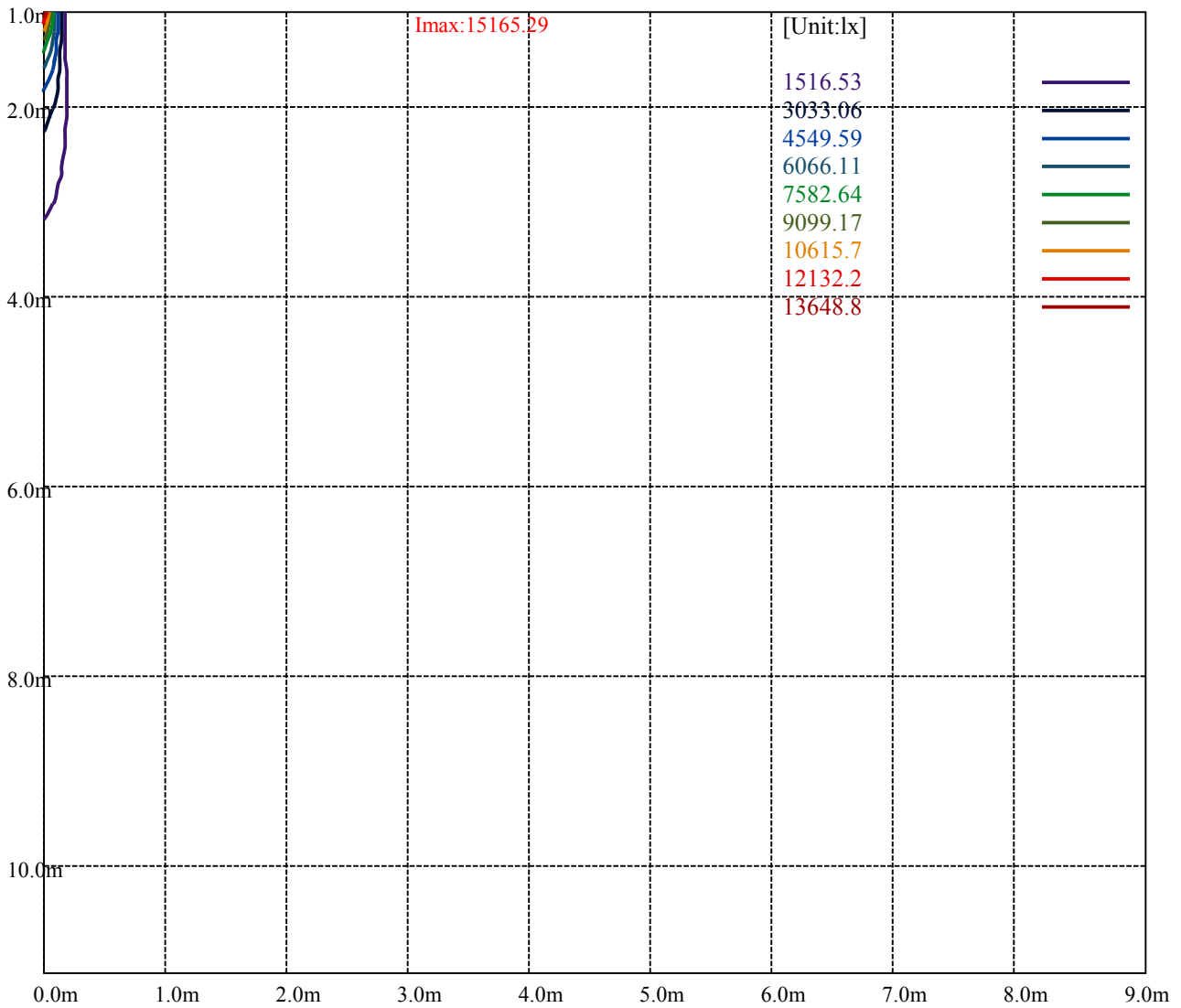
**Imax:15165.29**

(10%Imax) 1516.53	—
(20%Imax) 3033.06	—
(30%Imax) 4549.59	—
(40%Imax) 6066.11	—
(50%Imax) 7582.64	—
(60%Imax) 9099.17	—
(70%Imax) 10615.7	—
(80%Imax) 12132.2	—
(90%Imax) 13648.8	—





(10%Emax) 168.5011	—
(20%Emax) 337.0033	—
(30%Emax) 505.5045	—
(40%Emax) 674.0067	—
(50%Emax) 842.5078	—
(60%Emax) 1011.01	—
(70%Emax) 1179.511	—
(80%Emax) 1348.011	—
(90%Emax) 1516.511	—



Luminance Table

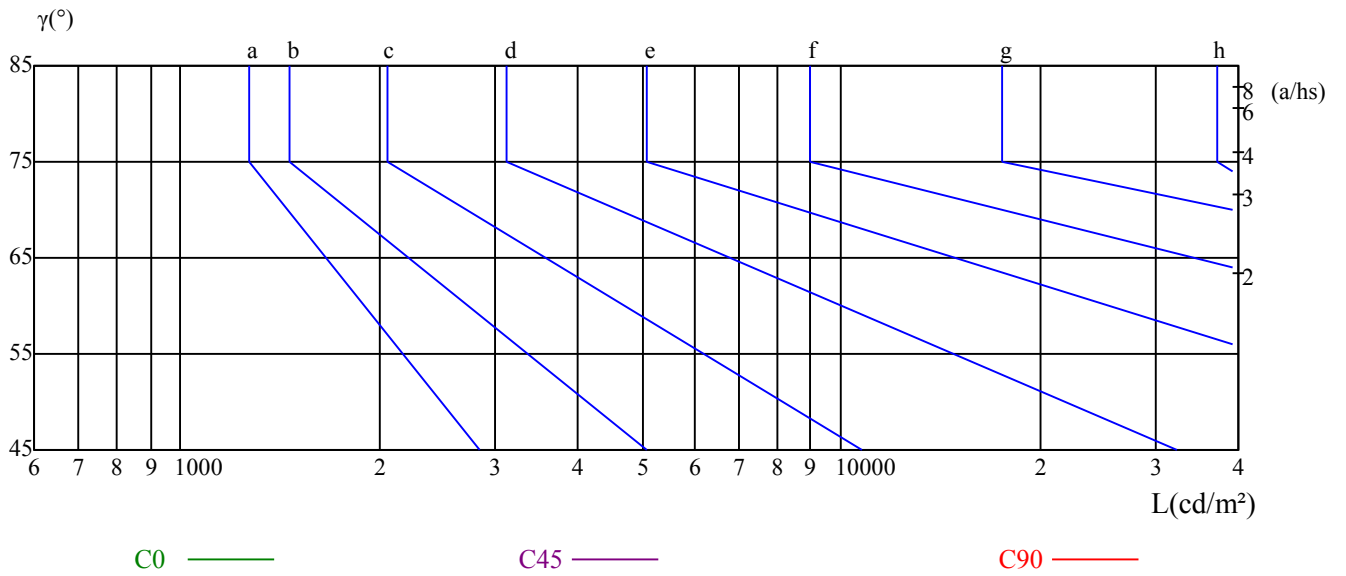
$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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

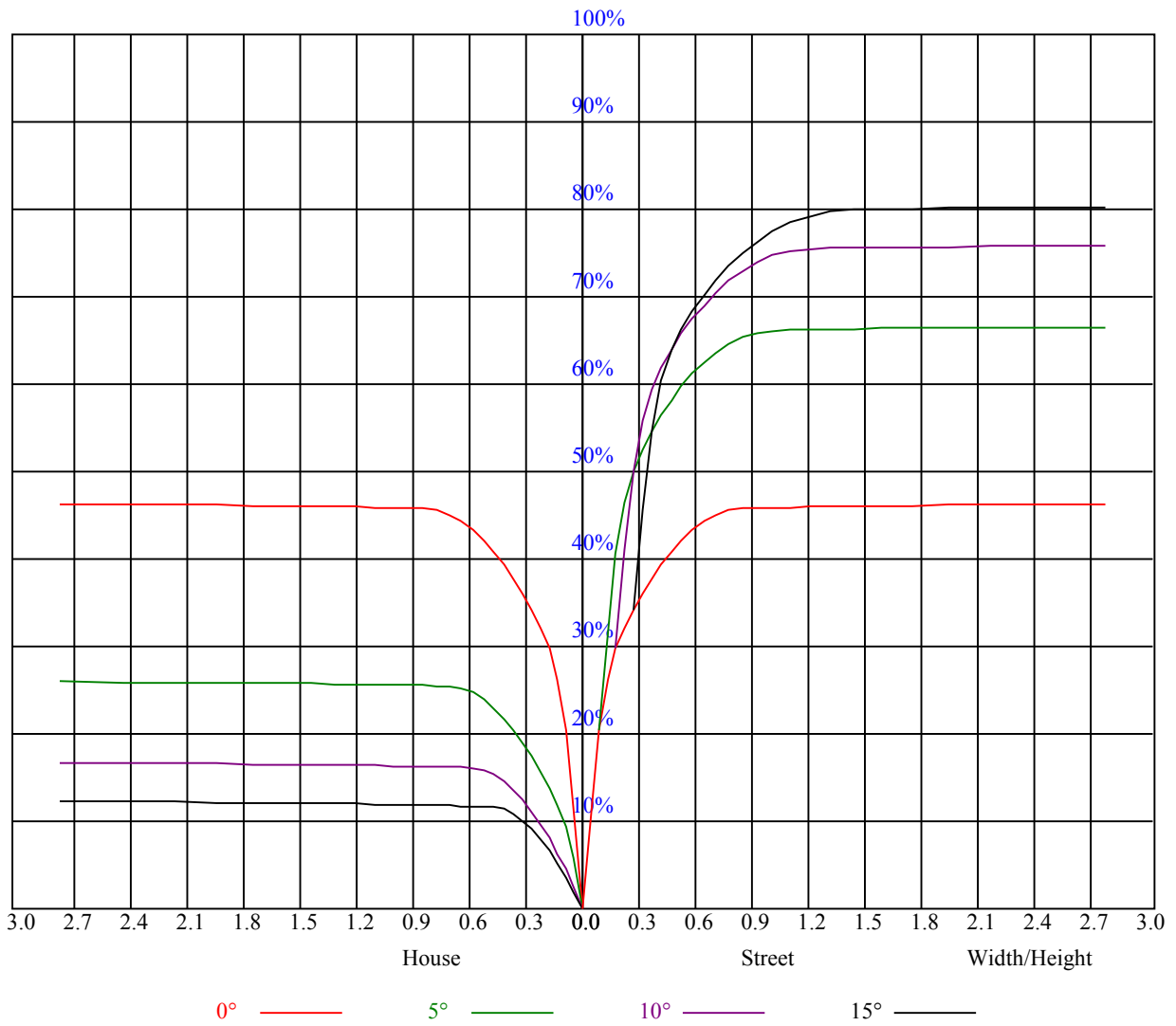
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.09	1.09	1.09	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.04	1.02	1.00	1.02	1.00	0.98	0.98	0.97	0.95	0.95	0.93	0.92	0.91	0.90	0.89	0.88
2	0.99	0.95	0.93	0.97	0.94	0.92	0.94	0.92	0.90	0.91	0.90	0.88	0.89	0.87	0.86	0.84
3	0.94	0.90	0.87	0.93	0.90	0.87	0.91	0.88	0.85	0.89	0.86	0.84	0.86	0.84	0.83	0.81
4	0.90	0.86	0.83	0.89	0.86	0.83	0.88	0.84	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.79
5	0.87	0.83	0.80	0.86	0.82	0.79	0.85	0.81	0.79	0.83	0.80	0.78	0.82	0.79	0.77	0.76
6	0.84	0.80	0.77	0.83	0.79	0.76	0.82	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.74
7	0.81	0.77	0.74	0.81	0.77	0.74	0.80	0.76	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.72
8	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.71	0.70
9	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
10	0.75	0.71	0.68	0.74	0.70	0.68	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.67	0.67



Intensity data(cd)

C/γ(°)	0.0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0
0.0	14865.23	14991.86	12338.14	8131.83	4591.70	2818.89	1114.34	737.76	600.67
45.0	15223.09	15201.07	12255.55	7983.18	4580.69	1912.11	1000.93	695.36	584.70
90.0	15382.76	14237.59	10746.46	6608.97	3032.51	1087.86	799.97	611.40	550.29
135.0	15190.06	13665.00	10042.29	5736.88	2912.48	1216.20	741.06	599.56	541.75
180.0	14865.23	10911.63	7483.27	3912.86	1581.77	805.31	634.14	558.55	516.04
225.0	15223.09	10924.84	8167.62	4051.60	1789.33	933.10	659.52	561.02	518.03
270.0	15382.76	13461.29	9579.81	5246.87	2818.89	1201.88	761.43	603.97	535.15
315.0	15190.06	13461.29	9552.84	5777.07	2779.80	1092.59	817.81	626.43	558.22
360.0	14865.23	14991.86	12338.14	8131.83	4591.70	2818.89	1114.34	737.76	600.67
C/γ(°)	18.0	20.0	22.0	24.0	26.0	28.0	30.0	32.0	34.0
0.0	550.56	504.32	461.37	430.54	405.77	387.60	376.59	364.47	352.36
45.0	531.29	490.55	448.71	420.63	397.51	380.44	368.88	355.66	345.20
90.0	506.74	466.77	434.06	412.26	391.23	376.31	364.25	351.48	341.40
135.0	496.61	458.62	434.39	410.17	393.65	380.44	369.98	358.42	347.41
180.0	475.36	445.68	420.80	401.47	385.17	374.00	361.61	349.88	312.94
225.0	480.09	451.02	430.27	405.66	391.29	379.67	366.68	356.05	330.56
270.0	492.75	461.37	436.60	412.92	396.96	383.74	371.63	360.62	349.06
315.0	512.41	473.32	439.90	411.55	391.51	378.84	367.61	354.34	344.27
360.0	550.56	504.32	461.37	430.54	405.77	387.60	376.59	364.47	352.36
C/γ(°)	36.0	38.0	40.0	42.0	44.0	46.0	48.0	50.0	52.0
0.0	336.39	245.06	93.49	14.15	10.35	8.53	7.27	5.51	5.34
45.0	323.18	278.03	94.31	14.48	9.97	8.15	6.55	5.51	5.29
90.0	298.24	183.39	62.27	10.85	9.30	7.65	5.73	5.34	5.18
135.0	281.34	152.34	34.58	10.68	8.86	6.83	5.73	5.34	5.18
180.0	193.47	72.01	11.34	9.86	7.76	6.28	5.40	5.23	5.12
225.0	213.40	80.16	12.22	9.86	7.76	6.17	5.51	5.29	5.18
270.0	278.59	147.44	33.53	10.24	8.86	6.94	6.11	5.45	5.29
315.0	289.21	168.36	50.65	10.13	8.48	7.05	5.67	5.40	5.23
360.0	336.39	245.06	93.49	14.15	10.35	8.53	7.27	5.51	5.34
C/γ(°)	54.0	56.0	58.0	60.0	62.0	64.0	66.0	68.0	70.0
0.0	5.18	5.07	4.90	4.84	4.79	4.73	4.68	4.68	4.62
45.0	5.18	5.01	4.96	4.90	4.79	4.73	4.73	4.68	4.62
90.0	5.07	4.96	4.84	4.79	4.79	4.73	4.68	4.62	4.62
135.0	5.07	4.96	4.84	4.79	4.73	4.73	4.68	4.68	4.62
180.0	5.01	4.90	4.84	4.79	4.73	4.68	4.68	4.62	4.62
225.0	5.07	4.96	4.84	4.79	4.73	4.68	4.68	4.62	4.62
270.0	5.12	5.01	4.90	4.84	4.79	4.73	4.73	4.68	4.62
315.0	5.07	4.96	4.84	4.79	4.73	4.68	4.62	4.62	4.57
360.0	5.18	5.07	4.90	4.84	4.79	4.73	4.68	4.68	4.62
C/γ(°)	72.0	74.0	76.0	78.0	80.0	82.0	84.0	86.0	88.0
0.0	4.62	4.57	4.57	4.51	4.57	4.51	4.51	4.51	4.51
45.0	4.62	4.62	4.57	4.57	4.57	4.51	4.57	4.51	4.51
90.0	4.62	4.62	4.62	4.57	4.57	4.57	4.62	4.51	4.51
135.0	4.57	4.57	4.57	4.57	4.51	4.51	4.51	4.51	4.46
180.0	4.57	4.57	4.57	4.51	4.51	4.46	4.51	4.46	4.46
225.0	4.57	4.57	4.57	4.57	4.51	4.51	4.51	4.51	4.46
270.0	4.62	4.62	4.57	4.57	4.57	4.57	4.62	4.51	4.46
315.0	4.57	4.57	4.57	4.51	4.51	4.51	4.46	4.51	4.46
360.0	4.62	4.57	4.57	4.51	4.57	4.51	4.51	4.51	4.51

Intensity data(cd)

C/ $\gamma$ (°)	90.0
0.0	4.51
45.0	4.46
90.0	4.46
135.0	4.51
180.0	4.46
225.0	4.46
270.0	4.46
315.0	4.46
360.0	4.51