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## Nata

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LumCAT: 1535-E	
Luminaire: 92.70.043.00	
Report No: NT2017080409	Voltage(V): 38.7000
Test No: GC2017080409	Current(A): 0.3000
LampCAT: SEOUL SAWx06	Power (W): 10.6100
Lamp flux(lm): 1216.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 25	Width(mm): 25
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1063.99  
Efficiency(%): 87.50%  
Lumens(lm)/Power(W): 100.28  
Central intensity(cd): 2002.623  
Maximum intensity(cd): 2002.623  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=35.6  
                                  [C90/270]Total=35.6  
Field angle(10%Imax): [C0/180]Total=79.8  
                                  [C90/270]Total=79.8  
Maximum s/h(1/2): C0\_180=0.57 C90\_270=0.57  
Maximum s/h(1/4): C0\_180=0.62 C90\_270=0.62  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 87.50%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.222%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2017/8/4  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.46

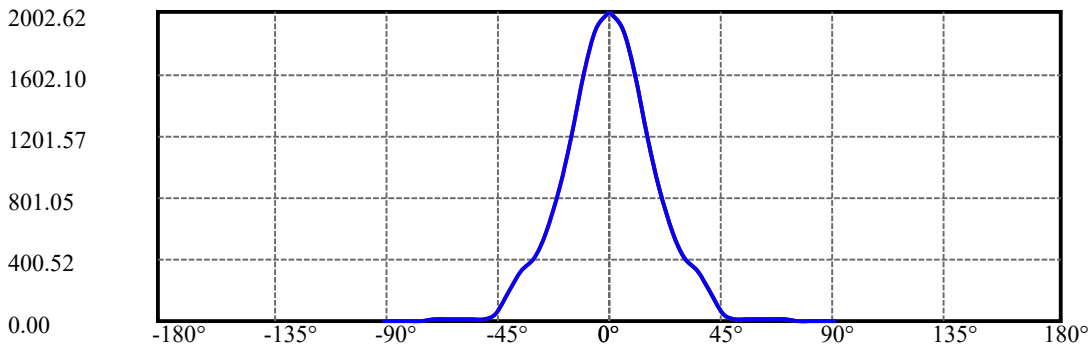
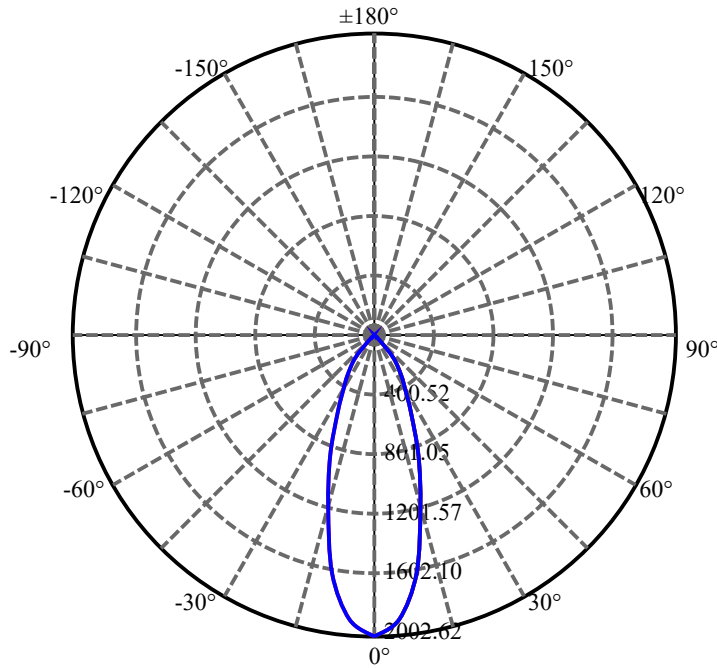
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2002.623	0.000	0	.000%	.000%
5.0	1895.772	46.604	46.604	3.833%	4.380%
10.0	1611.114	125.452	172.057	10.317%	16.171%
15.0	1185.372	165.886	337.942	13.642%	31.762%
20.0	858.412	168.437	506.379	13.852%	47.592%
25.0	566.916	149.491	655.869	12.294%	61.642%
30.0	411.418	123.809	779.678	10.182%	73.278%
35.0	319.461	107.627	887.305	8.851%	83.394%
40.0	197.974	86.330	973.636	7.100%	91.508%
45.0	52.389	46.357	1019.992	3.812%	95.865%
50.0	16.828	13.986	1033.978	1.150%	97.179%
55.0	11.715	6.206	1040.184	.510%	97.762%
60.0	9.440	4.890	1045.074	.402%	98.222%
65.0	7.680	4.162	1049.236	.342%	98.613%
70.0	6.483	3.586	1052.822	.295%	98.950%
75.0	5.642	3.169	1055.992	.261%	99.248%
80.0	5.113	2.878	1058.869	.237%	99.518%
85.0	4.737	2.677	1061.546	.220%	99.770%
90.0	4.202	2.448	1063.994	.201%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	779.68	64.12%	73.28%
0-40	973.64	80.07%	91.51%
0-60	1045.07	85.94%	98.22%
0-90	1061.55	87.30%	99.77%
0-120	1061.55	87.30%	99.77%
0-180	1063.99	87.50%	100.00%
60-90	21.36	1.76%	2.01%
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%
0-33.32	851.19	70.00%	80.00%

## ZONAL LUMEN SUMMARY

0-10	172.06
10-20	334.32
20-30	273.30
30-40	193.96
40-50	60.34
50-60	11.10
60-70	7.75
70-80	6.05
80-90	2.68
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

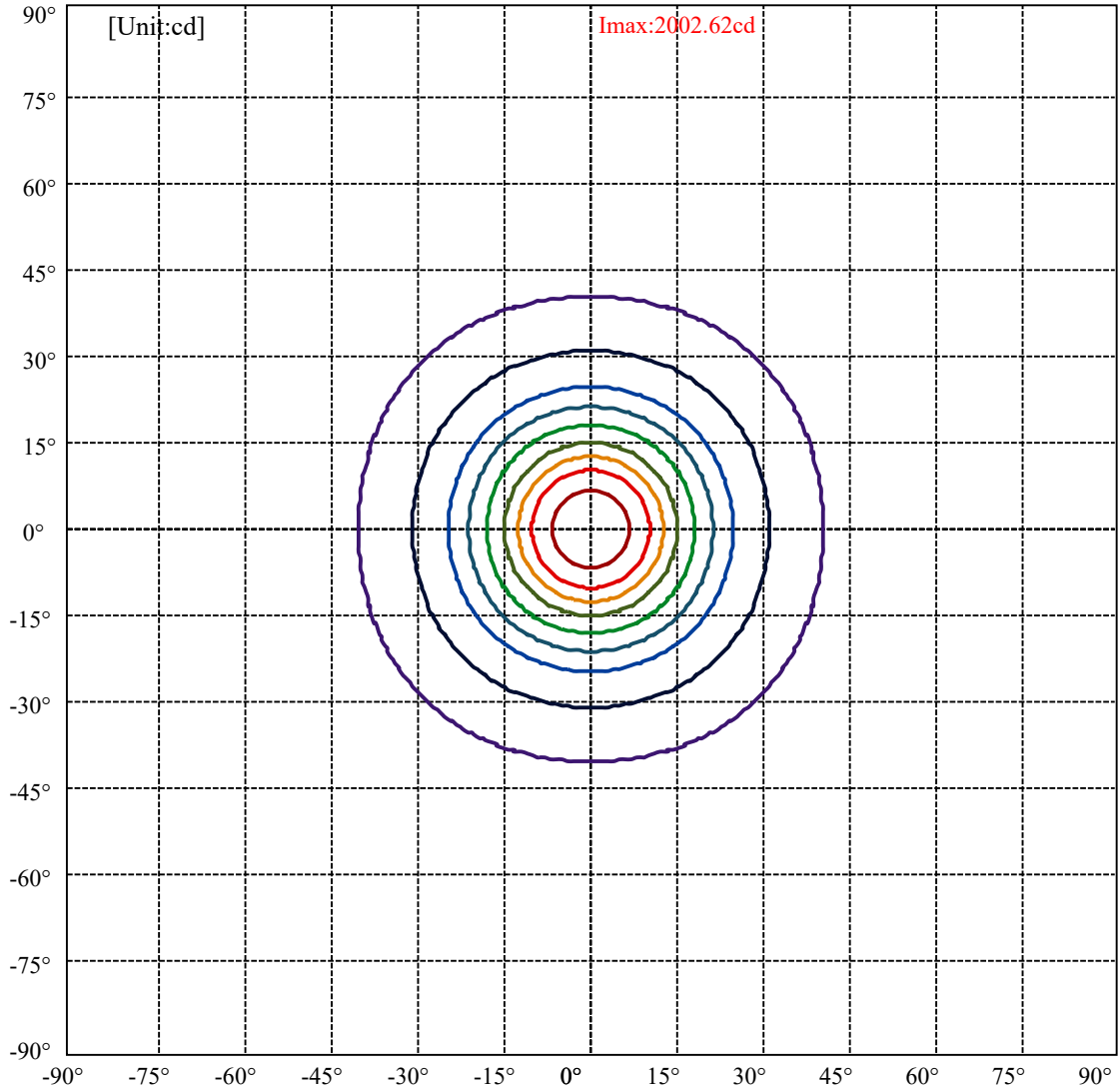


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

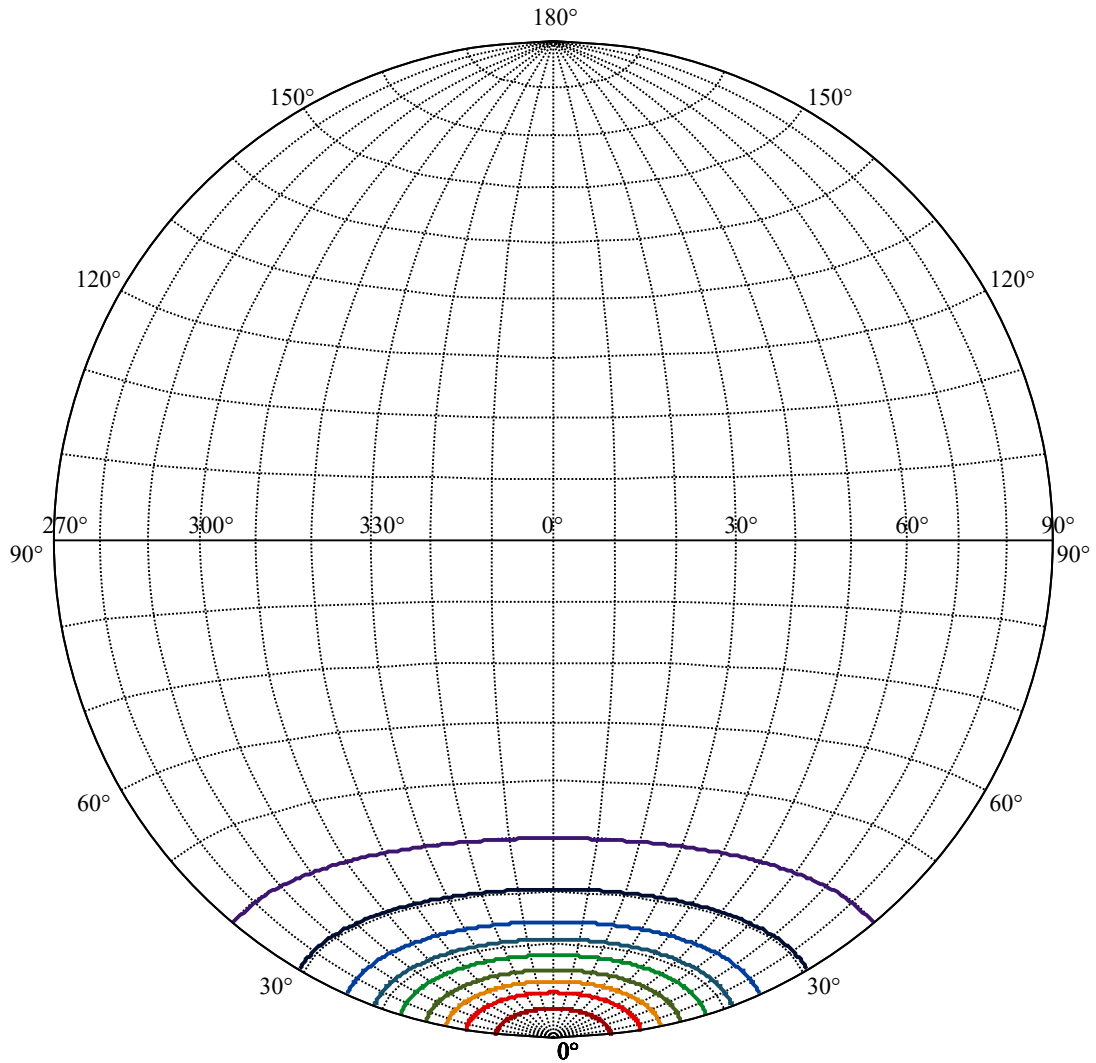
Field angle(10%Imax):C0/180Left:39.9 Right:39.9  
:C90/270Left:39.9 Right:39.9

Beam Angle(50%Imax):C0/180Left:17.8 Right:17.8  
:C90/270Left:17.8 Right:17.8





(10%Imax) 200.262	—
(20%Imax) 400.525	—
(30%Imax) 600.787	—
(40%Imax) 801.049	—
(50%Imax) 1001.31	—
(60%Imax) 1201.57	—
(70%Imax) 1401.84	—
(80%Imax) 1602.1	—
(90%Imax) 1802.36	—



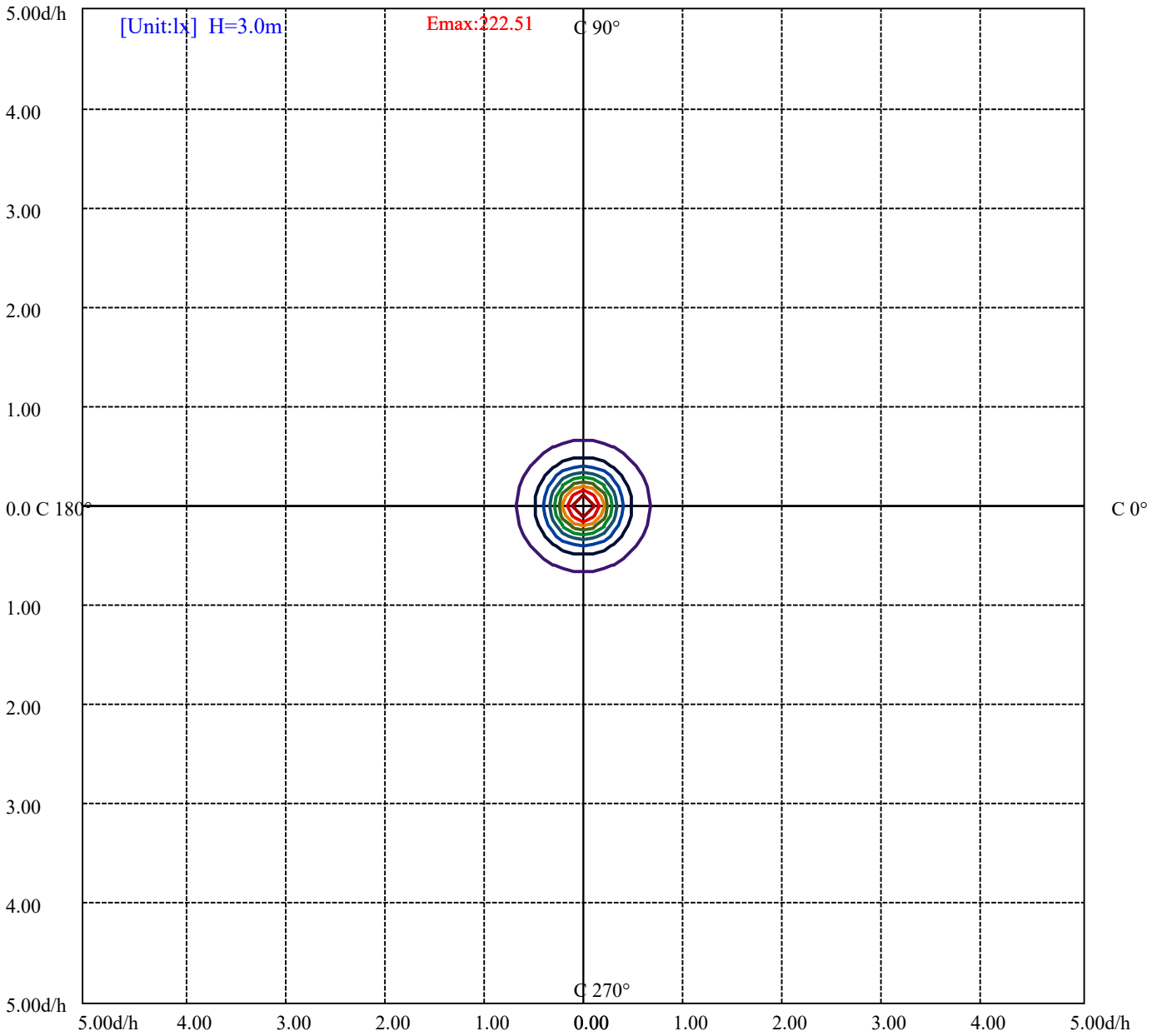
House

[Unit:cd]

Road

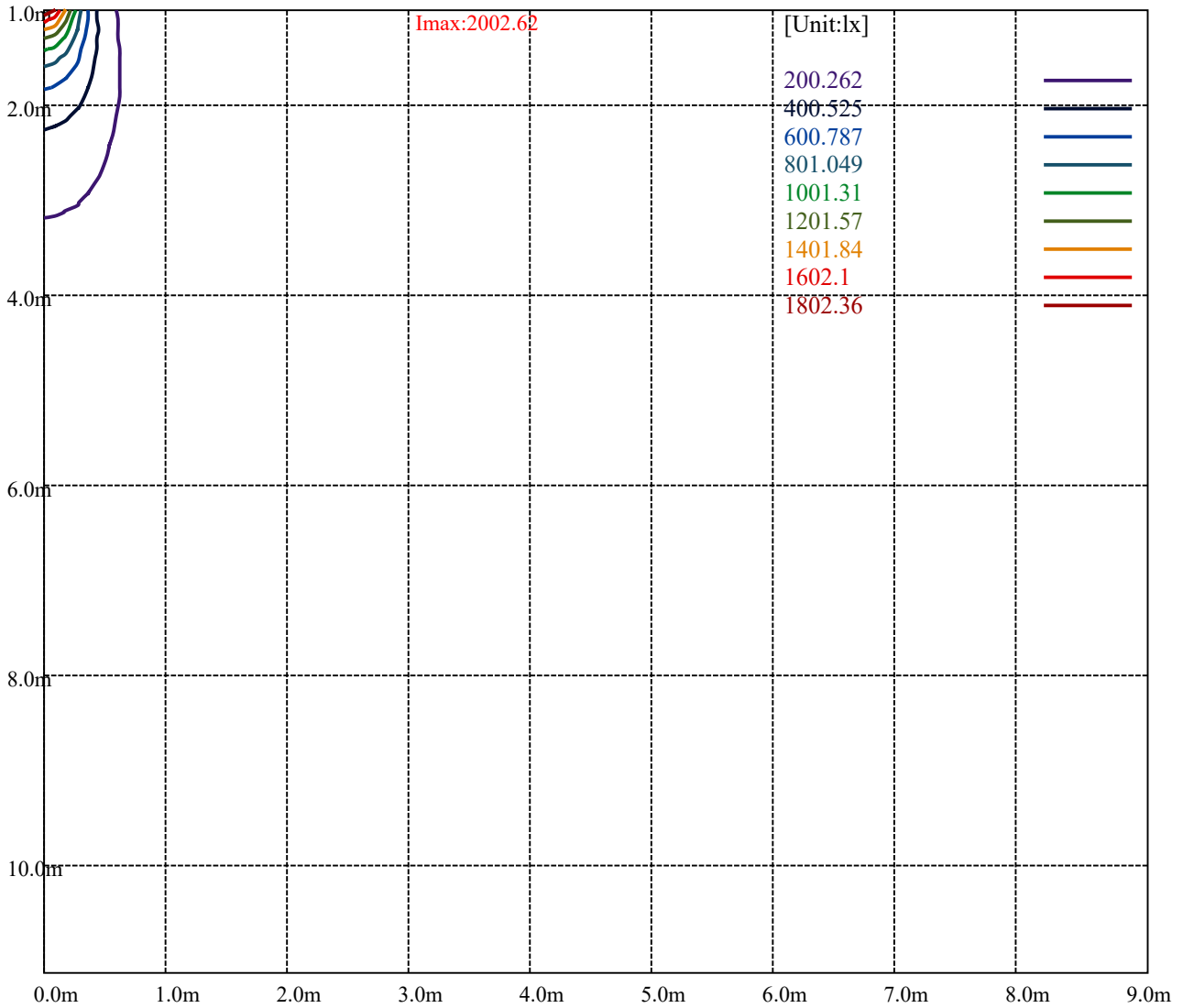
Imax:2002.62

(10%Imax)	200.262	—
(20%Imax)	400.525	—
(30%Imax)	600.787	—
(40%Imax)	801.049	—
(50%Imax)	1001.31	—
(60%Imax)	1201.57	—
(70%Imax)	1401.84	—
(80%Imax)	1602.1	—
(90%Imax)	1802.36	—



(10%Emax) 22.25133	—
(20%Emax) 44.50267	—
(30%Emax) 66.754	—
(40%Emax) 89.00533	—
(50%Emax) 111.2567	—
(60%Emax) 133.5078	—
(70%Emax) 155.7589	—
(80%Emax) 178.0111	—
(90%Emax) 200.2622	—





Luminance Table

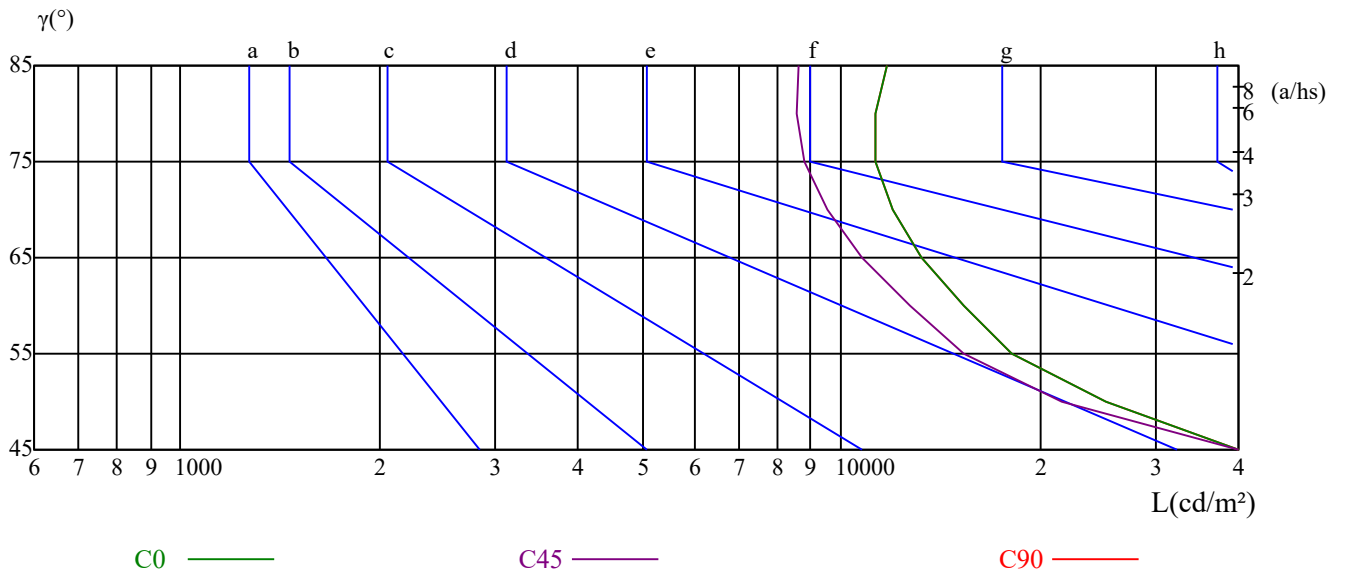
$\gamma$	45	50	55	60	65	70	75	80	85
C0	75989	25121	18157	15334	13211	11948	11287	11282	11751
C45	66153	21549	15334	12737	10775	9550	8817	8579	8652
C90	75989	25121	18157	15334	13211	11948	11287	11282	11751

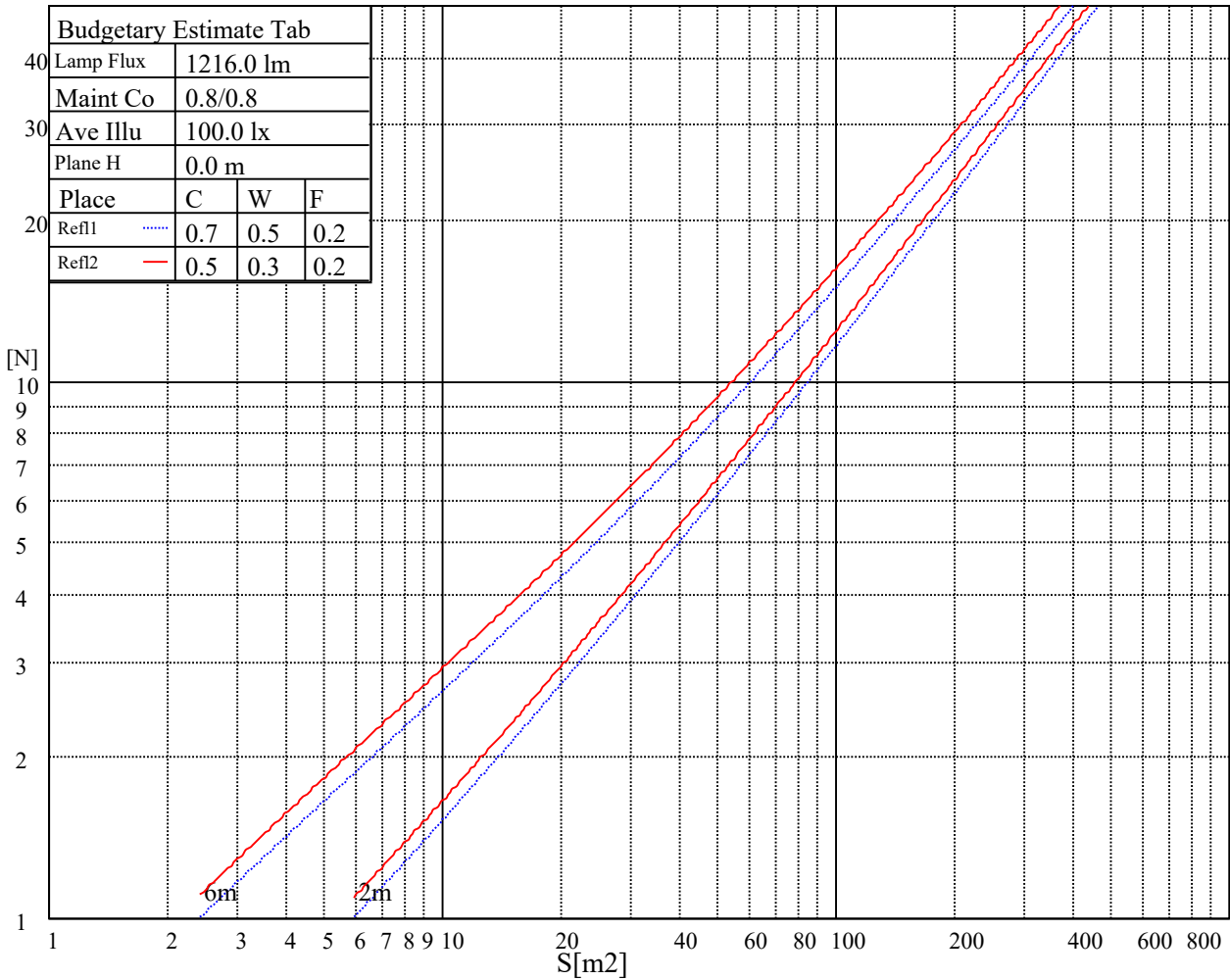
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
29076	29076	29076	34876	34876	34876	86968	86968	86968

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	1.04	1.04	1.04	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.97	0.95	0.93	0.95	0.93	0.91	0.91	0.90	0.88	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.90	0.87	0.84	0.89	0.86	0.83	0.86	0.84	0.81	0.83	0.81	0.80	0.81	0.79	0.78	0.76
3	0.85	0.80	0.77	0.83	0.80	0.76	0.81	0.78	0.75	0.79	0.76	0.74	0.77	0.75	0.73	0.72
4	0.80	0.75	0.71	0.79	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.68	0.67
5	0.75	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.65	0.71	0.68	0.65	0.70	0.67	0.64	0.63
6	0.71	0.66	0.62	0.70	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.66	0.63	0.61	0.59
7	0.67	0.62	0.58	0.66	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.56
8	0.63	0.59	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.53
9	0.60	0.55	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.58	0.54	0.52	0.50
10	0.57	0.53	0.50	0.57	0.53	0.49	0.56	0.52	0.49	0.56	0.52	0.49	0.55	0.52	0.49	0.48

Intensity data(cd)

<b>C/γ(°)</b>	<b>0.0</b>	<b>5.0</b>	<b>10.0</b>	<b>15.0</b>	<b>20.0</b>	<b>25.0</b>	<b>30.0</b>	<b>35.0</b>	<b>40.0</b>
<b>0.0</b>	1997.34	1949.48	1700.16	1338.42	962.22	638.88	459.13	371.20	283.82
<b>45.0</b>	2004.01	1914.42	1665.65	1274.98	904.34	604.93	435.75	349.49	281.60
<b>90.0</b>	2001.23	1870.45	1546.56	1100.57	809.73	534.14	406.09	318.99	162.73
<b>135.0</b>	2007.91	1876.57	1580.51	1180.37	824.20	538.15	391.23	287.16	148.53
<b>180.0</b>	1997.34	1833.72	1510.38	1097.17	738.89	488.18	367.91	273.42	138.35
<b>225.0</b>	2004.01	1871.56	1588.85	1096.67	814.80	539.21	387.84	308.59	174.80
<b>270.0</b>	2001.23	1933.34	1665.65	1288.33	925.49	611.61	435.20	312.21	181.93
<b>315.0</b>	2007.91	1916.64	1631.15	1106.47	887.64	580.22	408.20	334.63	212.03
<b>360.0</b>	1997.34	1949.48	1700.16	1338.42	962.22	638.88	459.13	371.20	283.82
<b>C/γ(°)</b>	<b>45.0</b>	<b>50.0</b>	<b>55.0</b>	<b>60.0</b>	<b>65.0</b>	<b>70.0</b>	<b>75.0</b>	<b>80.0</b>	<b>85.0</b>
<b>0.0</b>	82.36	13.63	9.57	8.40	7.35	6.57	5.84	5.34	4.90
<b>45.0</b>	57.88	11.07	8.57	7.62	7.01	6.40	5.95	5.57	5.18
<b>90.0</b>	31.83	12.35	9.63	8.18	7.29	6.46	5.84	5.34	5.18
<b>135.0</b>	40.07	20.26	12.91	9.96	7.85	6.57	5.51	5.01	4.45
<b>180.0</b>	30.78	16.86	11.85	9.41	7.29	5.95	5.12	4.73	4.45
<b>225.0</b>	47.53	17.14	12.63	10.13	7.79	6.18	5.40	4.90	4.56
<b>270.0</b>	67.39	26.04	16.64	12.13	9.02	7.12	5.73	5.01	4.56
<b>315.0</b>	61.27	17.25	11.91	9.68	7.85	6.62	5.73	5.01	4.62
<b>360.0</b>	82.36	13.63	9.57	8.40	7.35	6.57	5.84	5.34	4.90
<b>C/γ(°)</b>	<b>90.0</b>								
<b>0.0</b>	4.17								
<b>45.0</b>	4.23								
<b>90.0</b>	4.17								
<b>135.0</b>	4.12								
<b>180.0</b>	4.17								
<b>225.0</b>	4.34								
<b>270.0</b>	4.23								
<b>315.0</b>	4.17								
<b>360.0</b>	4.17								