
Nata

LumCAT: 1545-E	
Luminaire: 97.70.043	
Report No: NT2017080404	Voltage(V): 38.7000
Test No: GC2017080404	Current(A): 0.3000
LampCAT: SAWx06	Power (W): 11.6280
Lamp flux(lm): 1216.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 20	Width(mm): 20
Phm Type: C	Height(mm): 10

Photometric Results

Lumens(lm): 1072.45
Efficiency(%): 88.19%
Lumens(lm)/Power(W): 92.23
Central intensity(cd): 2075.109
Maximum intensity(cd): 2075.109
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=29.4
 [C90/270]Total=29.4
Field angle(10%Imax): [C0/180]Total=86.4
 [C90/270]Total=86.4
Maximum s/h(1/2): C0_180=0.49 C90_270=0.49
Maximum s/h(1/4): C0_180=0.54 C90_270=0.54
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 88.19%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.338%

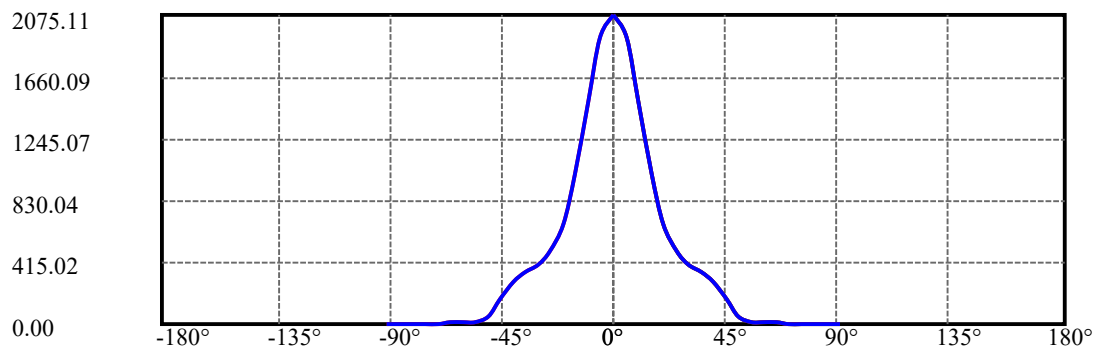
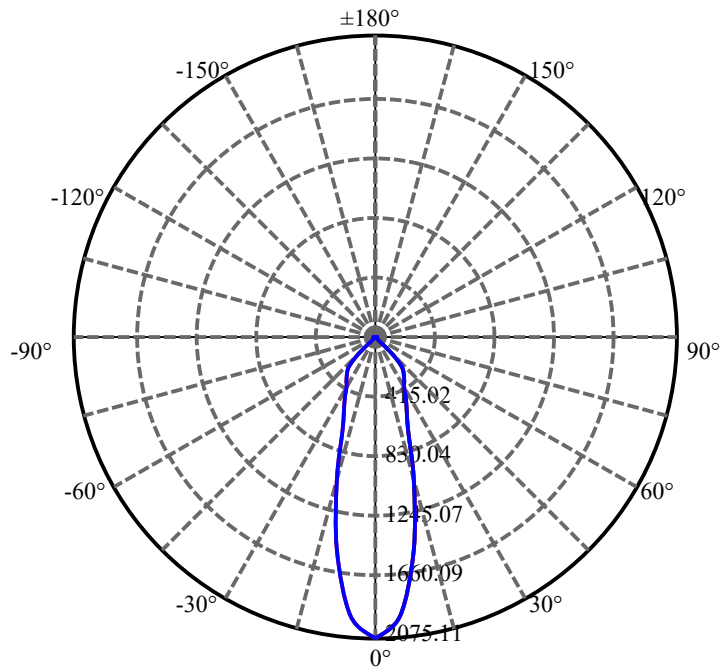
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2075.109	0.000	0	.000%	.000%
5.0	1920.954	47.772	47.772	3.929%	4.454%
10.0	1495.011	122.200	169.972	10.049%	15.849%
15.0	1007.384	148.440	318.412	12.207%	29.690%
20.0	670.950	138.318	456.73	11.375%	42.588%
25.0	488.322	121.586	578.316	9.999%	53.925%
30.0	399.585	112.365	690.682	9.241%	64.402%
35.0	348.205	110.117	800.799	9.056%	74.670%
40.0	282.397	105.211	906.011	8.652%	84.481%
45.0	165.139	82.865	988.875	6.815%	92.207%
50.0	57.648	45.017	1033.893	3.702%	96.405%
55.0	13.628	15.498	1049.391	1.274%	97.850%
60.0	9.016	5.234	1054.625	.430%	98.338%
65.0	6.936	3.878	1058.502	.319%	98.700%
70.0	6.038	3.285	1061.787	.270%	99.006%
75.0	5.440	3.000	1064.788	.247%	99.286%
80.0	4.974	2.786	1067.574	.229%	99.546%
85.0	4.536	2.584	1070.158	.212%	99.787%
90.0	3.826	2.289	1072.447	.188%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	690.68	56.80%	64.40%
0-40	906.01	74.51%	84.48%
0-60	1054.62	86.73%	98.34%
0-90	1070.16	88.01%	99.79%
0-120	1070.16	88.01%	99.79%
0-180	1072.45	88.19%	100.00%
60-90	20.77	1.71%	1.94%
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%
0-37.72	857.96	70.56%	80.00%

ZONAL LUMEN SUMMARY

0-10	169.97
10-20	286.76
20-30	233.95
30-40	215.33
40-50	127.88
50-60	20.73
60-70	7.16
70-80	5.79
80-90	2.58
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:

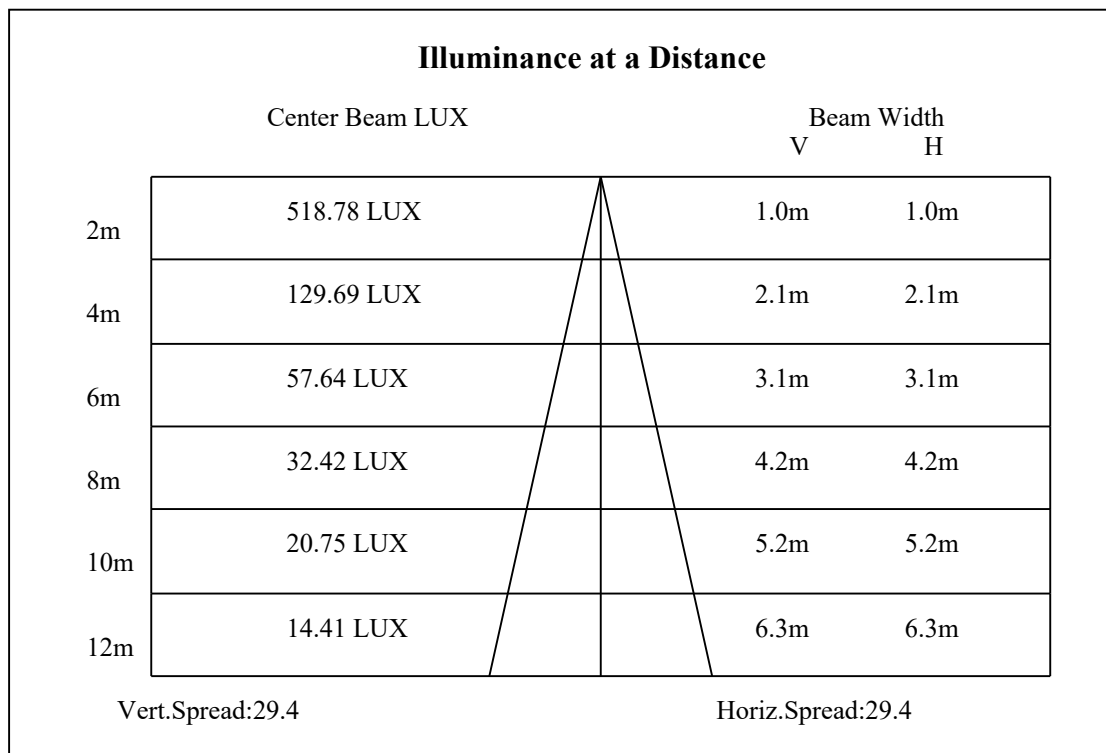
C90/C270:

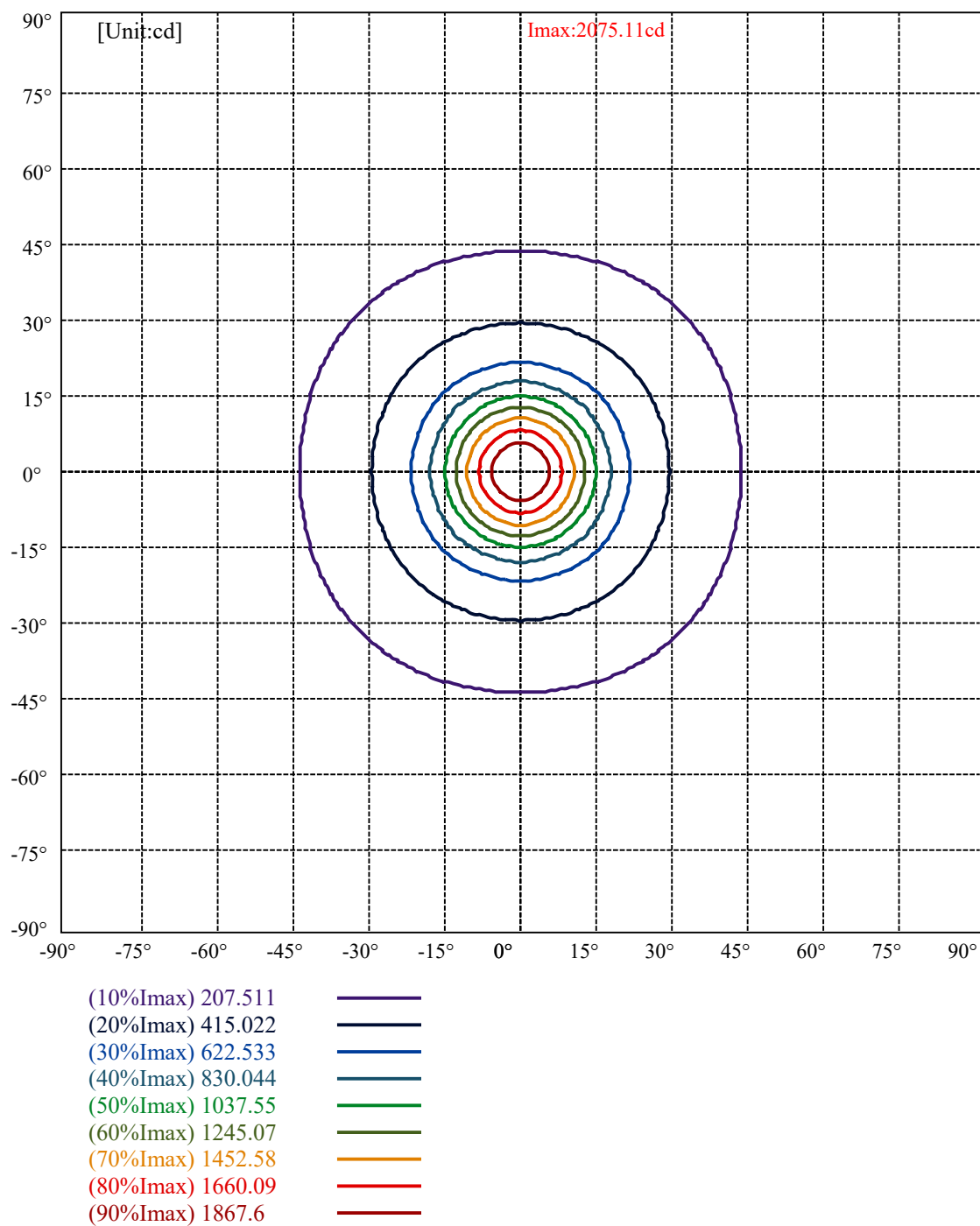
Field angle(10%Imax):C0/180Left:43.2 Right:43.2

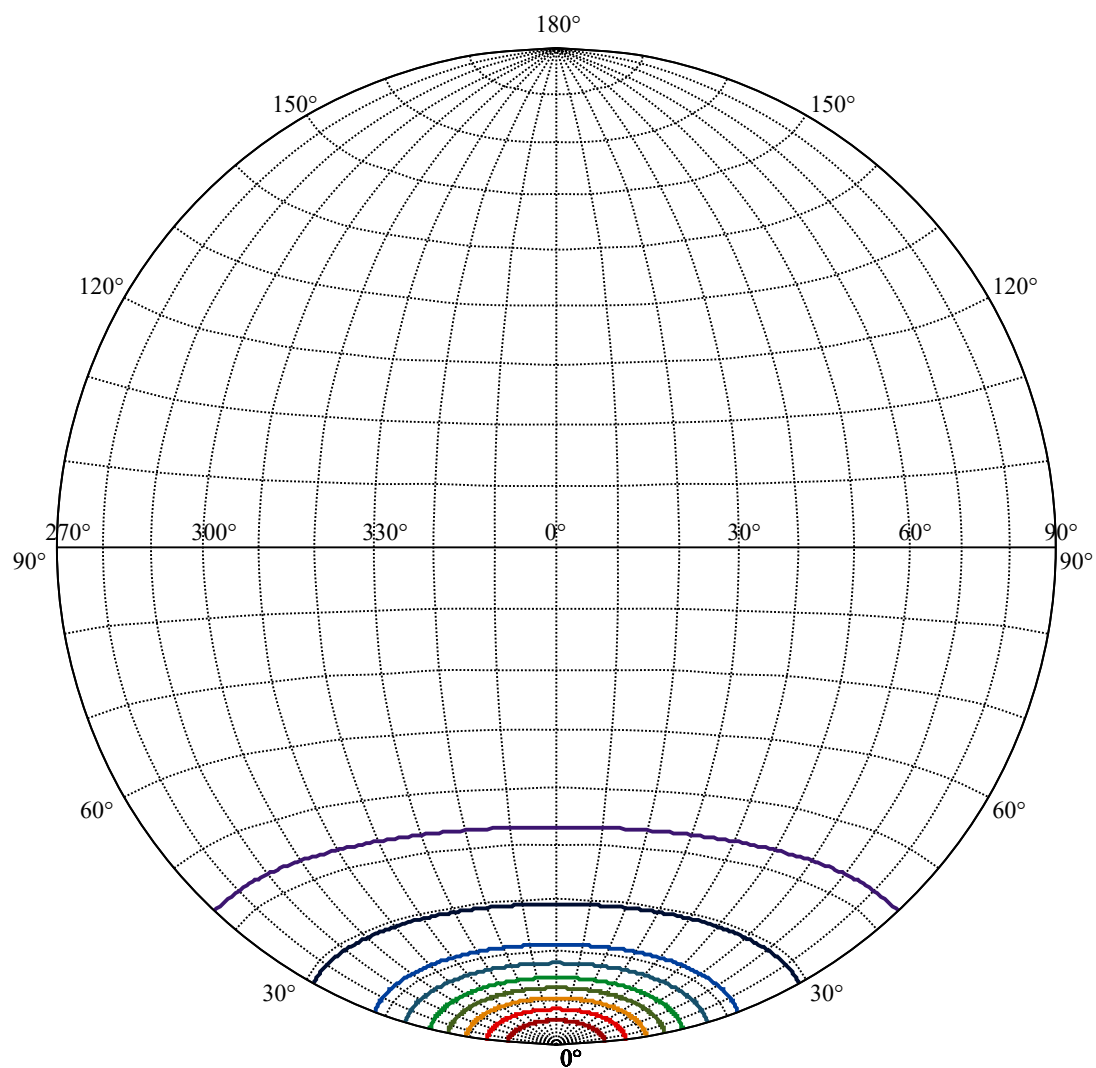
:C90/270Left:43.2 Right:43.2

Beam Angle(50%Imax):C0/180Left:14.7 Right:14.7

:C90/270Left:14.7 Right:14.7







House

[Unit:cd]

Road

Imax:2075.11

(10%Imax) 207.511

(20%Imax) 415.022

(30%Imax) 622.533

(40%Imax) 830.044

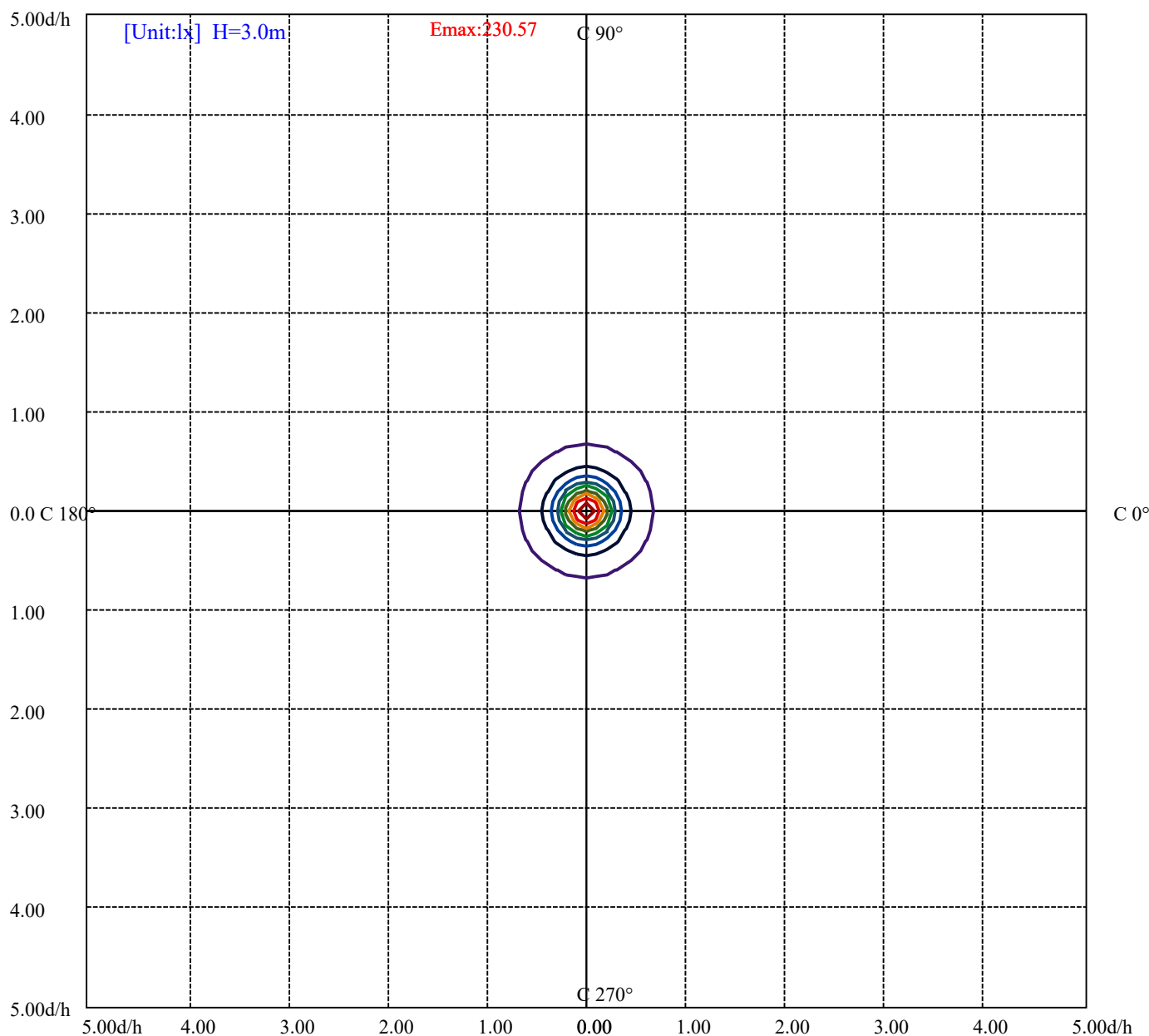
(50%Imax) 1037.55

(60%Imax) 1245.07

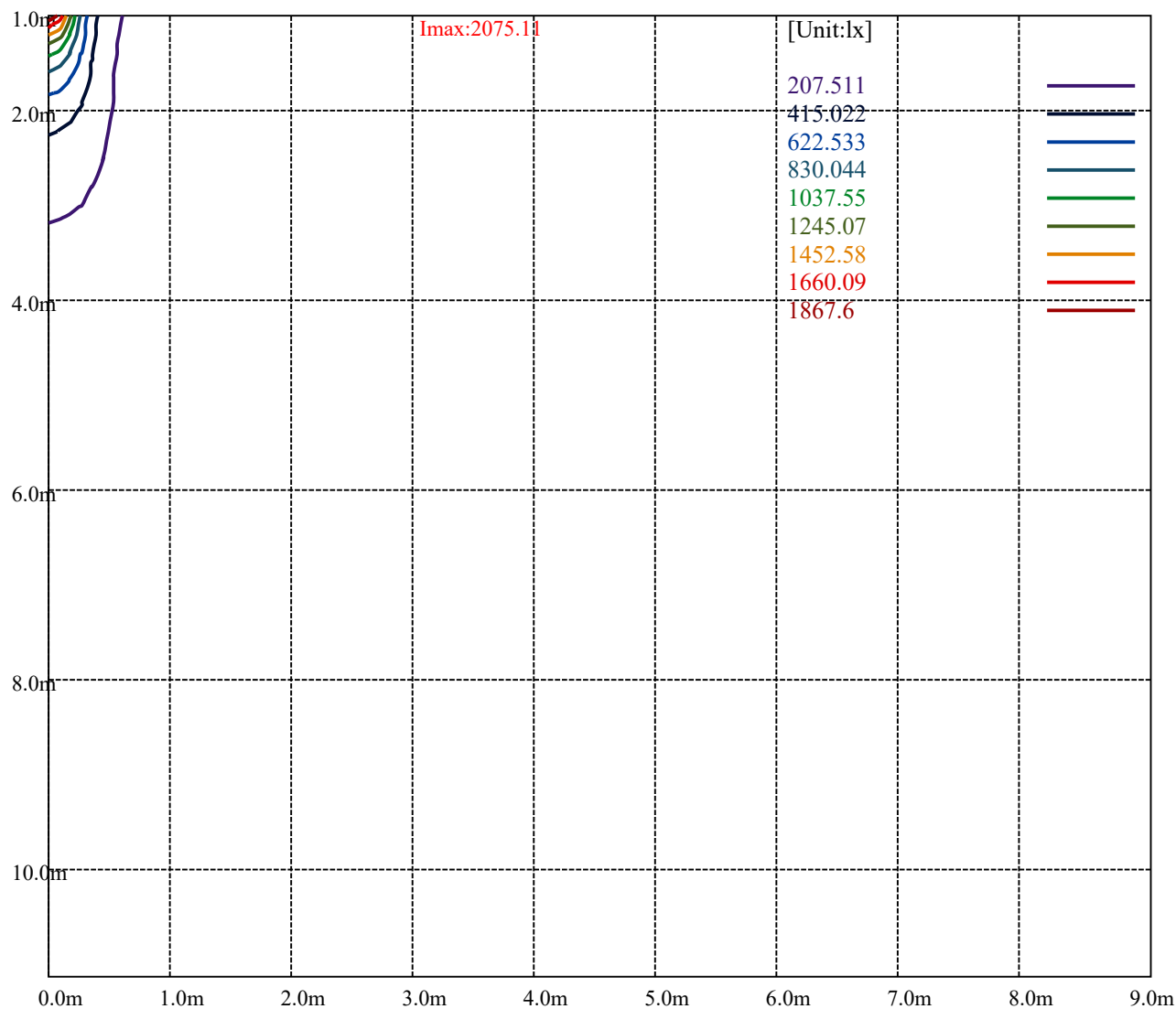
(70%Imax) 1452.58

(80%Imax) 1660.09

(90%Imax) 1867.6



(10%Emax) 23.05667	—
(20%Emax) 46.11345	—
(30%Emax) 69.17011	—
(40%Emax) 92.22689	—
(50%Emax) 115.2833	—
(60%Emax) 138.34	—
(70%Emax) 161.3967	—
(80%Emax) 184.4533	—
(90%Emax) 207.51	—



Luminance Table

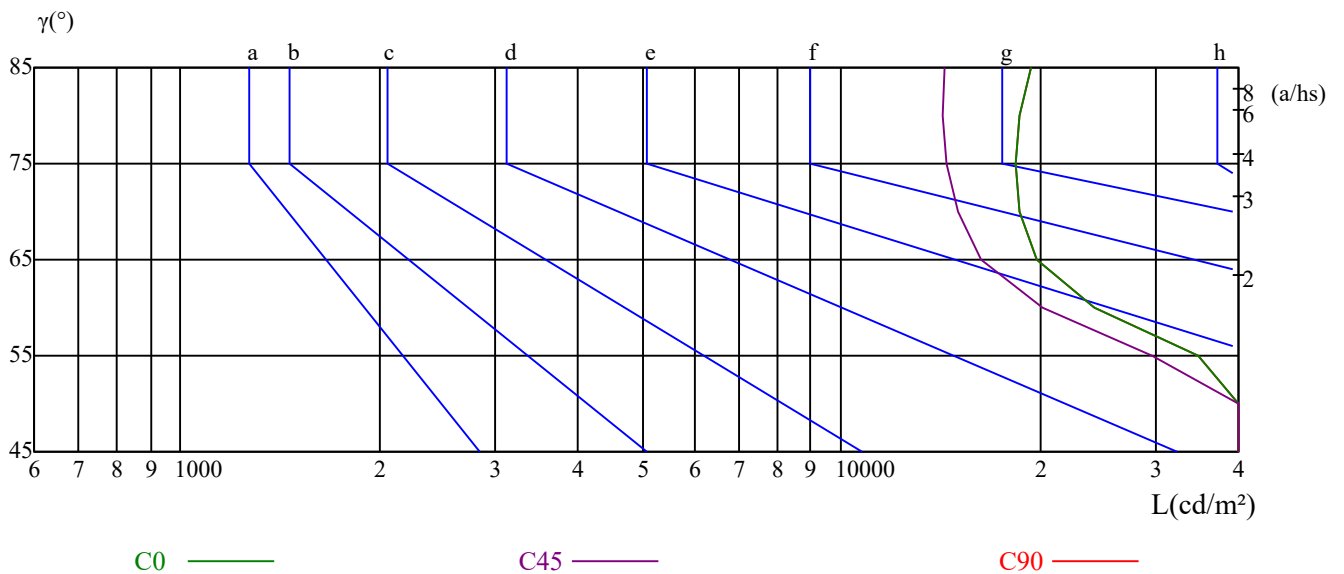
γ	45	50	55	60	65	70	75	80	85
C0	389237	140494	34653	24157	19798	18594	18334	18669	19375
C45	342014	121676	29553	20262	16304	14998	14440	14293	14325
C90	389237	140494	34653	24157	19798	18594	18334	18669	19375

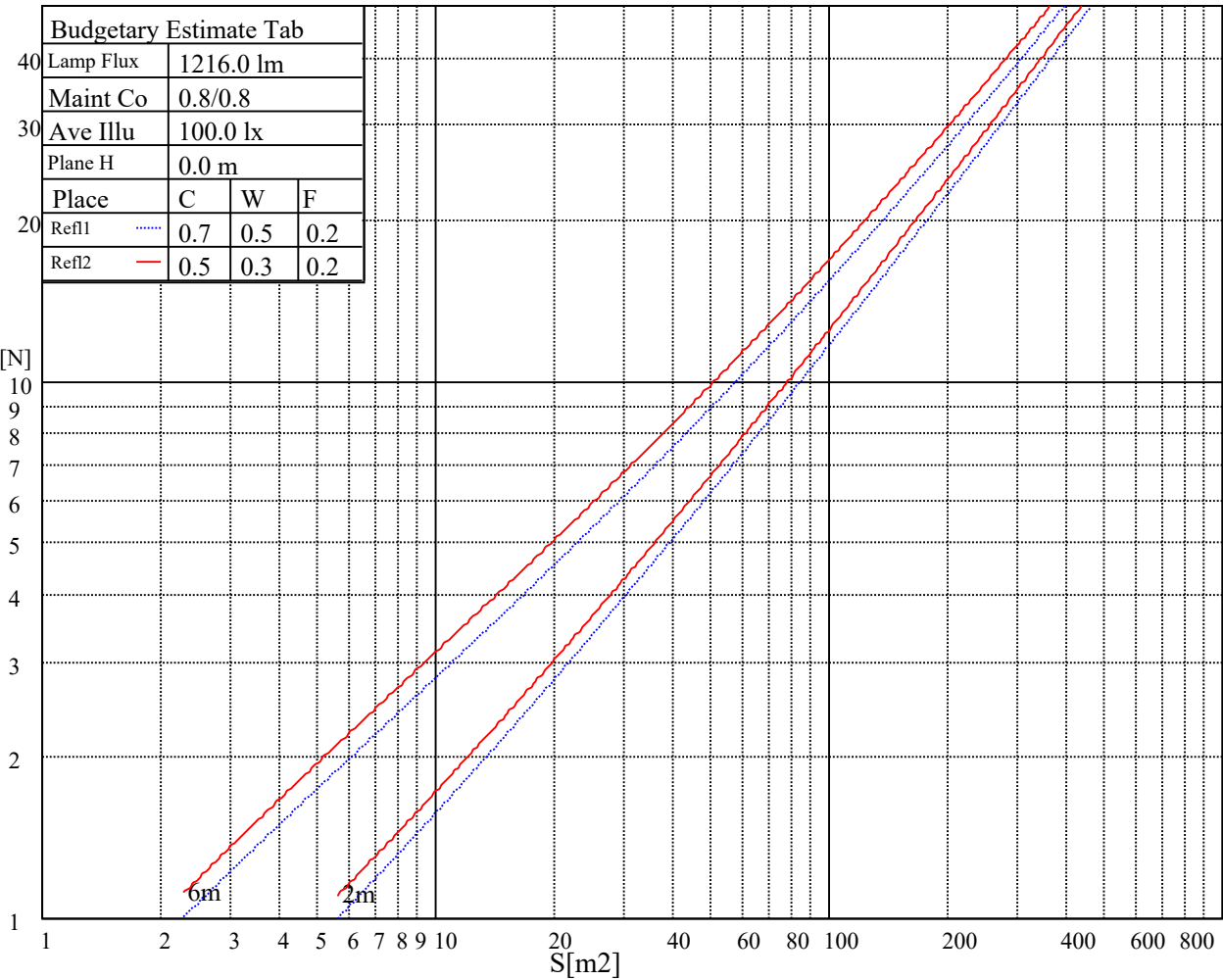
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
41027	41027	41027	52546	52546	52546	130101	130101	130101

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 RHOC=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	0.88
1	0.97	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.90	0.87	0.83	0.89	0.85	0.83	0.86	0.83	0.81	0.83	0.81	0.79	0.81	0.79	0.77	0.76
3	0.84	0.79	0.76	0.83	0.79	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.70
4	0.78	0.73	0.70	0.77	0.73	0.69	0.75	0.71	0.68	0.74	0.70	0.68	0.72	0.69	0.67	0.65
5	0.73	0.68	0.64	0.73	0.68	0.64	0.71	0.67	0.63	0.69	0.66	0.63	0.68	0.65	0.62	0.61
6	0.69	0.64	0.60	0.68	0.63	0.60	0.67	0.62	0.59	0.66	0.62	0.59	0.64	0.61	0.58	0.57
7	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.53
8	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.54	0.52	0.50
9	0.58	0.53	0.49	0.58	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.49	0.47
10	0.55	0.50	0.47	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.45

Nata 1545-E

Intensity data(cd)									
Appendix Page: 13 Total:13									
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	2072.47	1984.54	1570.49	1081.87	698.98	495.86	398.47	346.71	284.38
45.0	2077.47	1936.68	1533.76	1055.71	683.96	480.83	394.01	342.81	286.61
90.0	2074.69	1892.71	1460.30	971.34	639.16	472.15	383.33	331.18	259.28
135.0	2075.80	1952.81	1538.77	1042.35	705.11	501.42	399.58	346.15	290.50
180.0	2072.47	1850.97	1401.31	930.94	648.40	489.12	407.04	364.13	291.84
225.0	2077.47	1902.17	1455.29	969.45	672.72	498.47	414.88	363.85	297.35
270.0	2074.69	1941.68	1554.35	1041.24	683.96	503.09	409.60	361.18	304.97
315.0	2075.80	1906.07	1445.83	966.17	635.32	465.64	389.78	329.62	244.25
360.0	2072.47	1984.54	1570.49	1081.87	698.98	495.86	398.47	346.71	284.38
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	161.45	66.95	15.69	9.74	6.90	5.84	5.12	4.67	4.29
45.0	182.87	64.28	13.97	9.35	6.40	5.51	5.01	4.62	4.40
90.0	155.60	47.53	11.91	7.85	6.23	5.45	4.95	4.51	4.23
135.0	174.08	65.28	13.08	8.79	7.01	6.29	5.62	5.18	4.51
180.0	168.85	49.64	11.69	8.01	6.90	6.18	5.68	5.12	4.84
225.0	167.12	53.37	10.91	7.90	6.51	5.90	5.45	5.18	4.51
270.0	184.99	68.40	12.69	9.41	7.18	6.29	5.79	5.34	5.12
315.0	126.16	45.75	19.09	11.07	8.35	6.85	5.90	5.18	4.40
360.0	161.45	66.95	15.69	9.74	6.90	5.84	5.12	4.67	4.29
C/γ(°)	90.0								
0.0	3.84								
45.0	3.78								
90.0	3.78								
135.0	3.78								
180.0	3.78								
225.0	3.90								
270.0	3.90								
315.0	3.84								
360.0	3.84								