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Nata

LumCAT: 2-1091-E	
Luminaire: 92.76.263.00	
Report No: NT2014071108	Voltage(V): 29.8000
Test No: GC2014071108	Current(A): 1.0500
LampCAT: VERO18	Power (W): 31.0000
Lamp flux(lm): 3684.0	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): 3275.42
Efficiency(%): 88.91%
Lumens(lm)/Power(W): 105.66
Central intensity(cd): 10610.010
Maximum intensity(cd): 10610.010
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=24.7
 [C90/270]Total=24.7
Field angle(10%Imax): [C0/180]Total=61.3
 [C90/270]Total=61.3
Maximum s/h(1/2): C0_180=0.42 C90_270=0.42
Maximum s/h(1/4): C0_180=0.44 C90_270=0.44
Up flux rate of lamp(%): 3.03%
Down flux rate of lamp(%): 85.88%
Up flux rate of LUM(%): 3.41%
Down flux rate of LUM(%): 96.59%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.916%

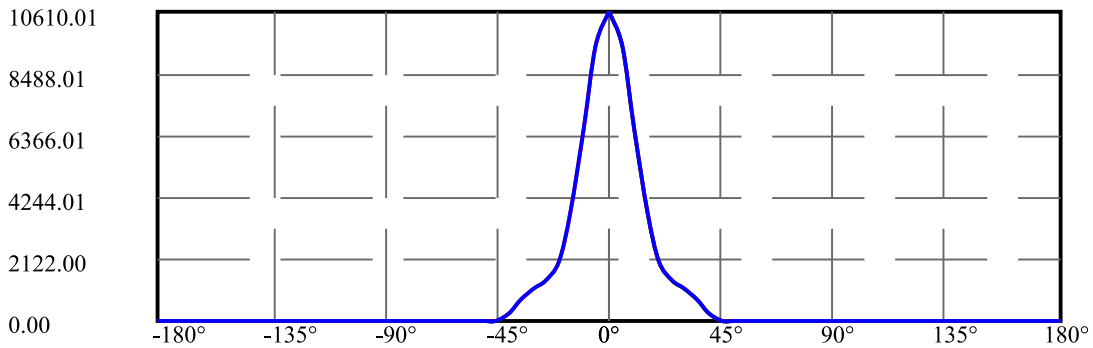
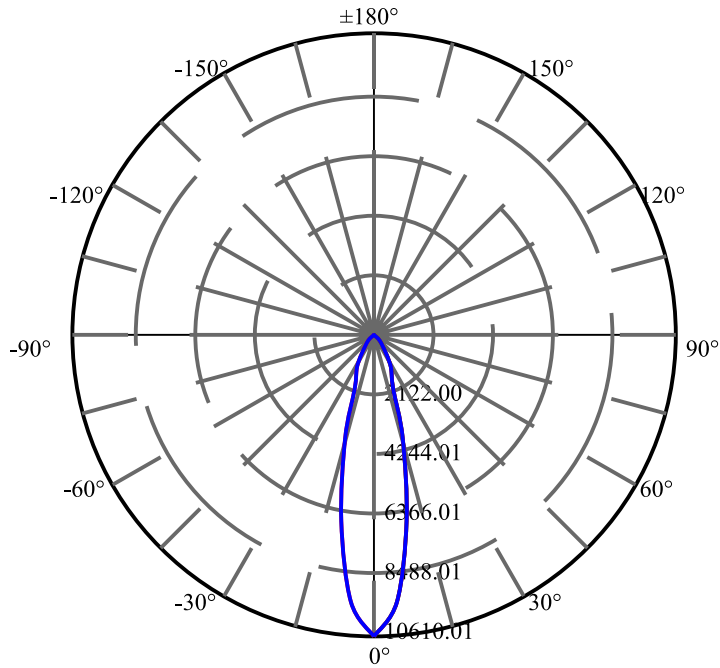
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	10610.014	0.000	0	.000%	.000%
5.0	9455.198	239.874	239.874	6.511%	7.323%
10.0	6671.666	576.909	816.783	15.660%	24.937%
15.0	3786.164	620.351	1437.134	16.839%	43.876%
20.0	2010.787	477.750	1914.884	12.968%	58.462%
25.0	1374.002	355.002	2269.886	9.636%	69.301%
30.0	1110.552	314.422	2584.309	8.535%	78.900%
35.0	726.264	270.484	2854.793	7.342%	87.158%
40.0	286.536	168.978	3023.771	4.587%	92.317%
45.0	32.185	59.014	3082.785	1.602%	94.119%
50.0	18.387	10.219	3093.003	.277%	94.431%
55.0	17.652	7.836	3100.84	.213%	94.670%
60.0	17.205	8.057	3108.897	.219%	94.916%
65.0	16.974	8.309	3117.206	.226%	95.170%
70.0	16.932	8.585	3125.791	.233%	95.432%
75.0	17.380	8.968	3134.759	.243%	95.706%
80.0	17.925	9.447	3144.206	.256%	95.994%
85.0	18.534	9.907	3154.113	.269%	96.297%
90.0	16.324	9.544	3163.657	.259%	96.588%
95.0	16.352	8.947	3172.603	.243%	96.861%
100.0	16.345	8.884	3181.488	.241%	97.132%
105.0	16.345	8.747	3190.234	.237%	97.399%
110.0	16.324	8.539	3198.773	.232%	97.660%
115.0	16.310	8.263	3207.036	.224%	97.912%
120.0	16.317	7.931	3214.968	.215%	98.154%
125.0	16.358	7.553	3222.52	.205%	98.385%
130.0	16.463	7.137	3229.657	.194%	98.603%
135.0	16.547	6.670	3236.327	.181%	98.807%
140.0	16.890	6.191	3242.518	.168%	98.996%
145.0	18.051	5.830	3248.348	.158%	99.174%
150.0	20.450	5.670	3254.018	.154%	99.347%
155.0	23.716	5.589	3259.607	.152%	99.517%
160.0	26.416	5.258	3264.865	.143%	99.678%
165.0	27.926	4.479	3269.343	.122%	99.815%
170.0	28.570	3.351	3272.694	.091%	99.917%
175.0	28.528	2.043	3274.737	.055%	99.979%
180.0	28.367	0.680	3275.417	.018%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2584.31	70.15%	78.90%
0-40	3023.77	82.08%	92.32%
0-60	3108.90	84.39%	94.92%
0-90	3163.66	85.88%	96.59%
0-120	3214.97	87.27%	98.15%
0-180	3275.42	88.91%	100.00%
60-90	62.82	1.71%	1.92%
90-120	60.86	1.65%	1.86%
90-130	75.54	2.05%	2.31%
90-150	99.91	2.71%	3.05%
90-180	120.62	3.27%	3.68%
0-30.67	2620.33	71.13%	80.00%

ZONAL LUMEN SUMMARY

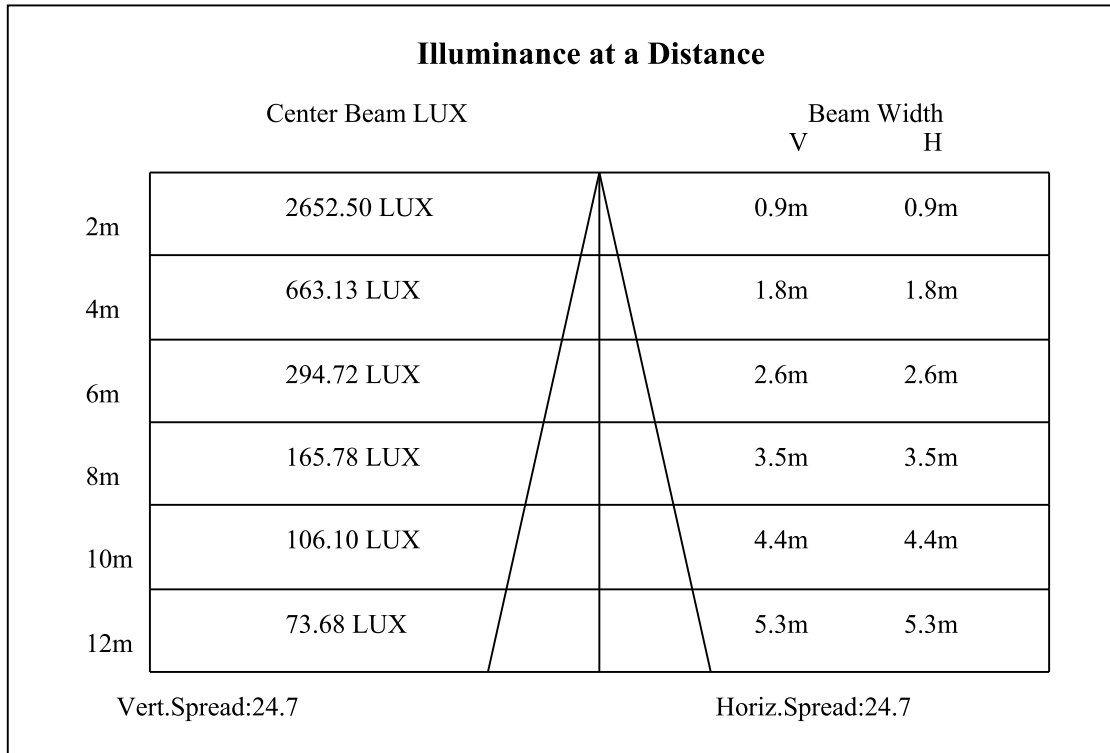
0-10	816.78
10-20	1098.10
20-30	669.42
30-40	439.46
40-50	69.23
50-60	15.89
60-70	16.89
70-80	18.42
80-90	19.45
90-100	17.83
100-110	17.29
110-120	16.19
120-130	14.69
130-140	12.86
140-150	11.50
150-160	10.85
160-170	7.83
170-180	2.04

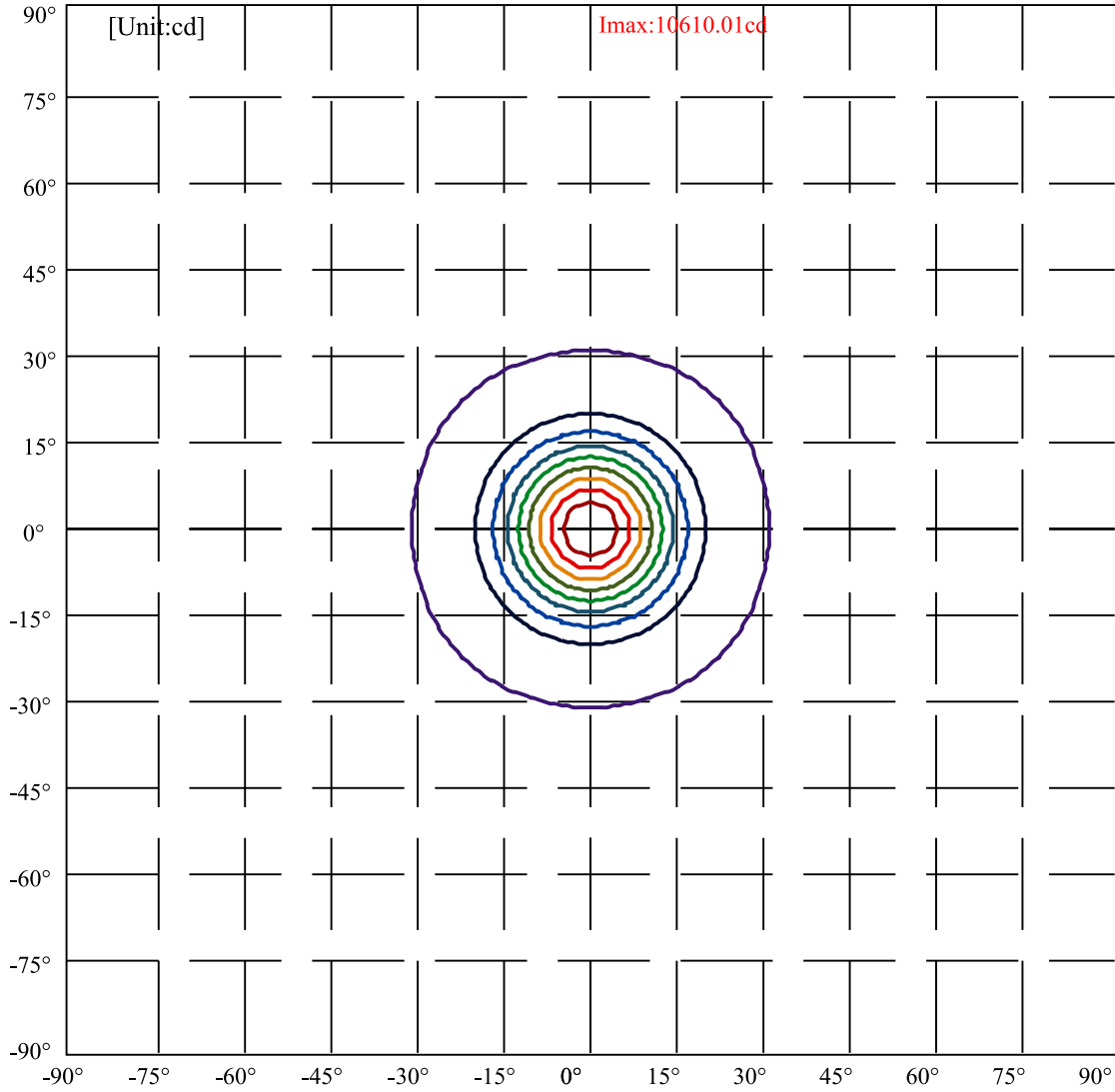


C0(Max): —————
C0/C180: —————
C90/C270: —————

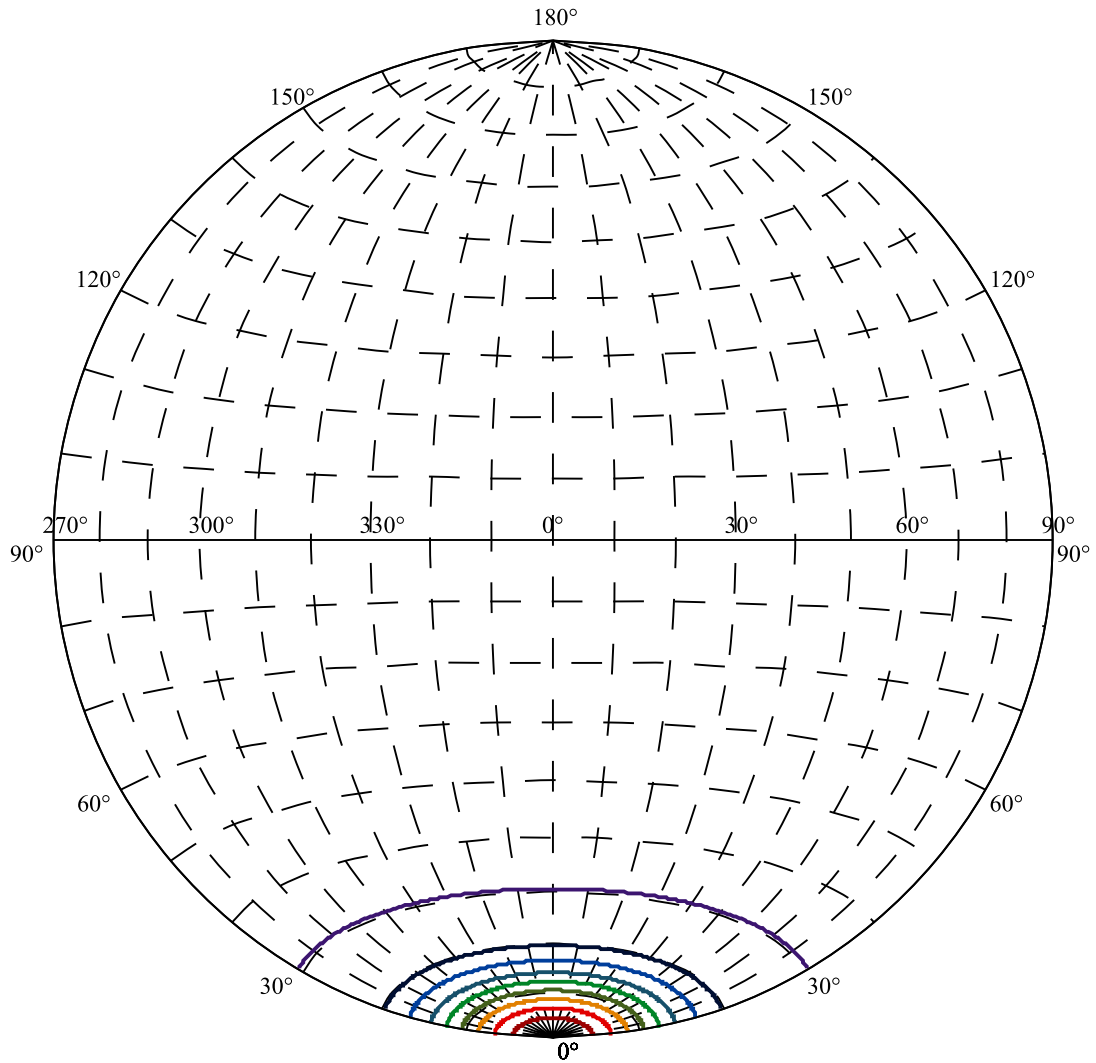
Field angle(10%Imax):C0/180Left:30.6 Right:30.6
:C90/270Left:30.6 Right:30.6

Beam Angle(50%Imax):C0/180Left:12.4 Right:12.4
:C90/270Left:12.4 Right:12.4





(10%Imax) 1061	—
(20%Imax) 2122	—
(30%Imax) 3183	—
(40%Imax) 4244.01	—
(50%Imax) 5305.01	—
(60%Imax) 6366.01	—
(70%Imax) 7427.01	—
(80%Imax) 8488.01	—
(90%Imax) 9549.01	—



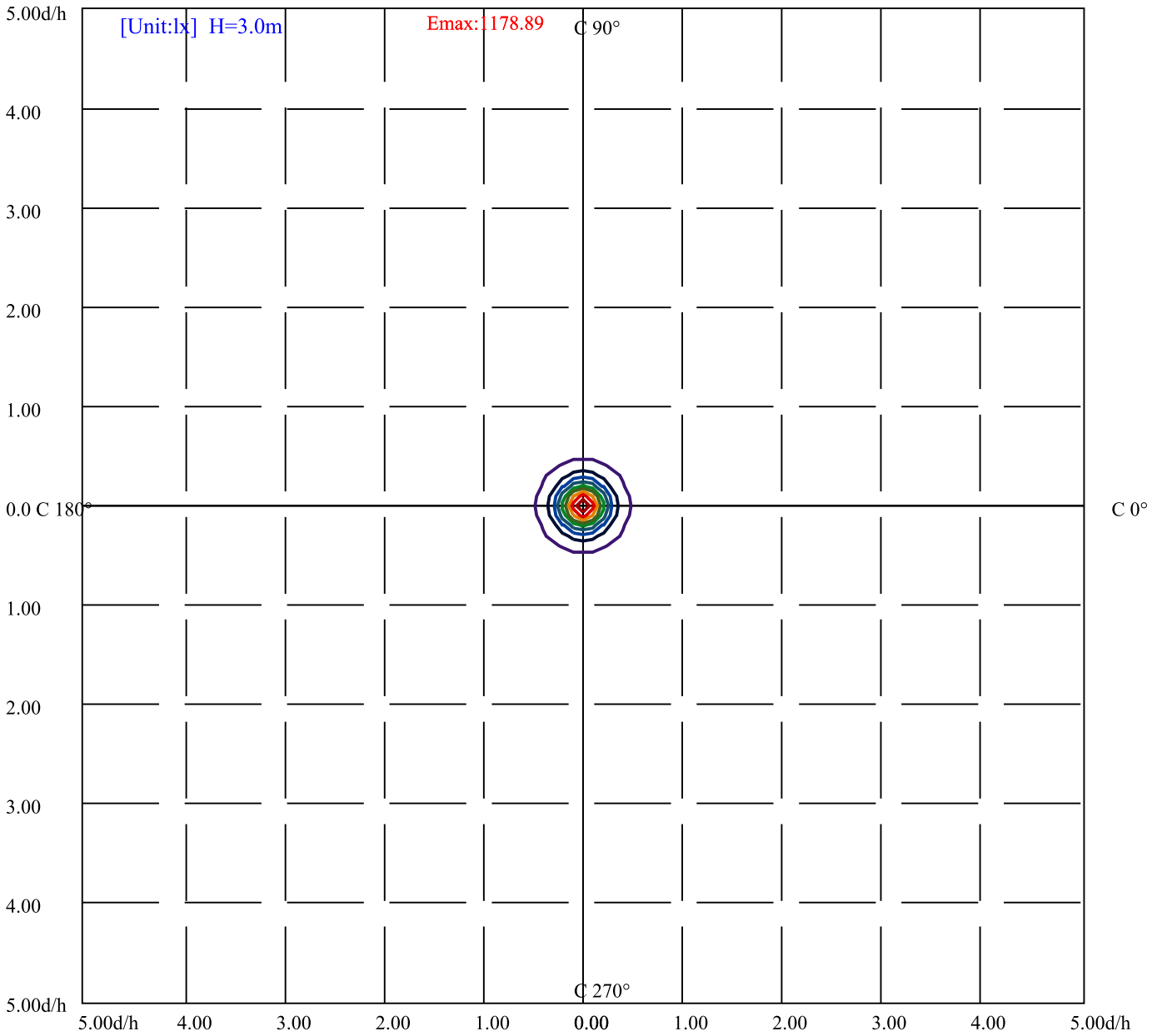
House

[Unit:cd]

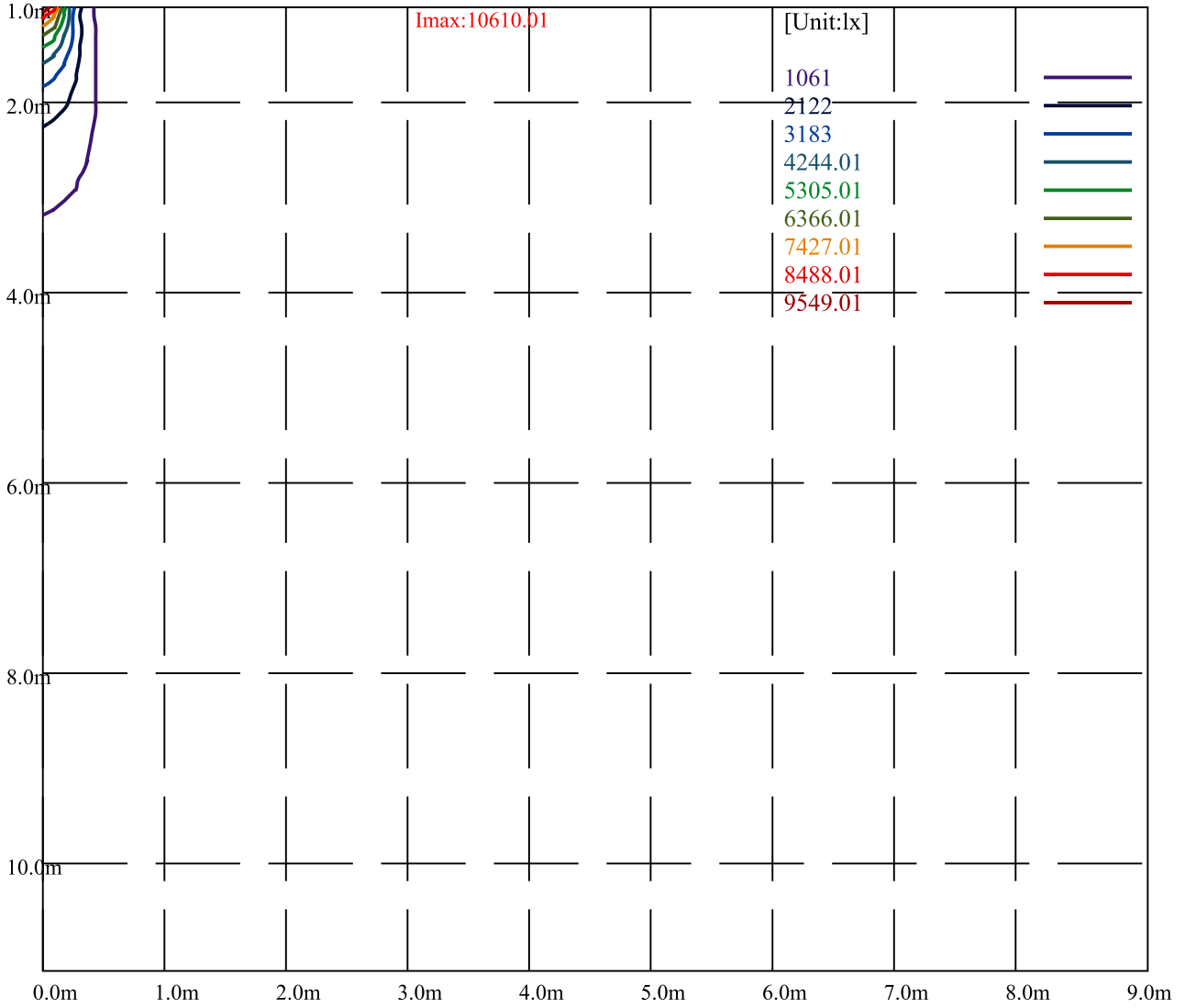
Road

Imax:10610.01

(10%Imax) 1061	—
(20%Imax) 2122	—
(30%Imax) 3183	—
(40%Imax) 4244.01	—
(50%Imax) 5305.01	—
(60%Imax) 6366.01	—
(70%Imax) 7427.01	—
(80%Imax) 8488.01	—
(90%Imax) 9549.01	—



- (10%Emax) 117.8889
- (20%Emax) 235.7778
- (30%Emax) 353.6656
- (40%Emax) 471.5545
- (50%Emax) 589.4434
- (60%Emax) 707.3323
- (70%Emax) 825.22
- (80%Emax) 943.1089
- (90%Emax) 1060.998



Luminance Table

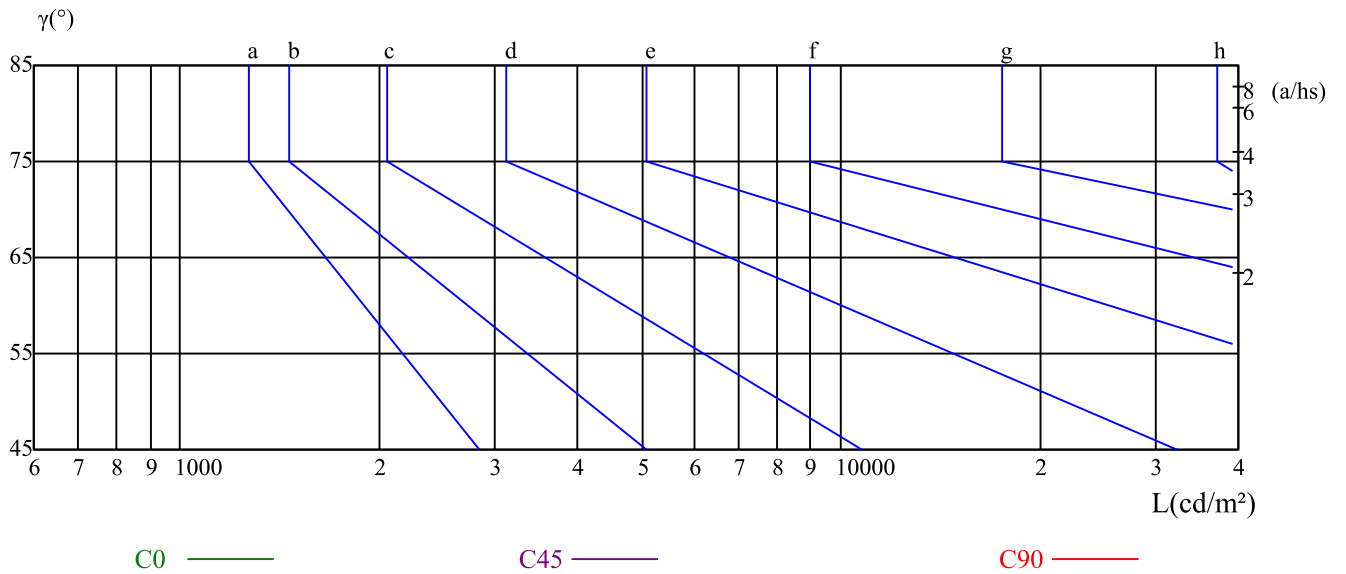
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

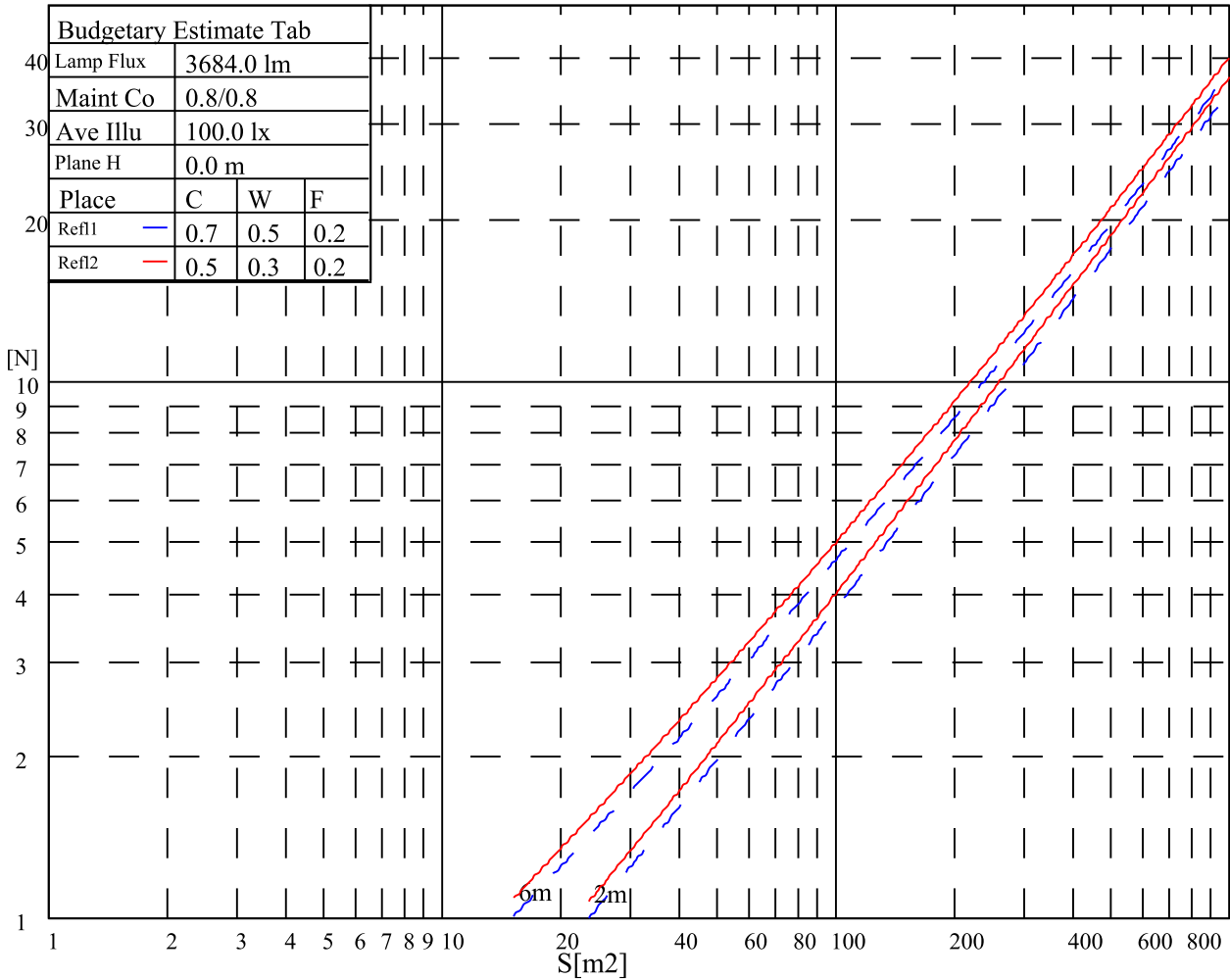
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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 RHOF=20 CU															
0	1.05	1.05	1.05	1.02	1.02	1.02	0.97	0.97	0.97	0.92	0.92	0.92	0.88	0.88	0.88	0.86
1	0.98	0.96	0.94	0.96	0.94	0.92	0.92	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.81
2	0.92	0.89	0.86	0.91	0.88	0.85	0.87	0.85	0.83	0.84	0.82	0.81	0.81	0.80	0.79	0.77
3	0.87	0.83	0.80	0.86	0.82	0.79	0.83	0.80	0.78	0.81	0.78	0.76	0.78	0.76	0.75	0.73
4	0.83	0.78	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.70
5	0.79	0.74	0.71	0.78	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.69	0.72	0.70	0.68	0.66
6	0.75	0.70	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
7	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.61
8	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.59	0.58
9	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.56
10	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.54

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	10515.88	9878.04	7419.02	4360.21	2250.33	1448.00	1165.45	809.04	374.31
45.0	10674.22	9879.16	7255.09	4145.92	2203.89	1398.76	1140.27	758.69	346.33
90.0	10642.33	9334.76	6372.19	3552.29	1830.14	1301.41	1058.19	675.32	212.72
135.0	10607.64	9548.50	6729.15	3711.19	1955.47	1355.68	1107.82	692.11	320.60
180.0	10515.88	8851.35	5814.37	3324.01	1775.87	1305.32	1040.06	639.68	188.94
225.0	10674.22	9149.01	6168.53	3433.68	1881.61	1359.04	1101.38	706.77	226.15
270.0	10642.33	9591.58	6992.12	3976.39	2180.95	1430.65	1160.97	777.15	341.86
315.0	10607.64	9409.18	6622.85	3785.60	2008.06	1393.16	1110.28	751.36	281.37
360.0	10515.88	9878.04	7419.02	4360.21	2250.33	1448.00	1165.45	809.04	374.31
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	40.56	18.58	17.62	17.12	16.90	16.73	16.79	17.06	17.85
45.0	34.24	18.52	17.79	17.34	17.06	17.01	17.74	17.68	17.57
90.0	30.44	18.41	17.74	17.34	17.12	17.06	17.62	18.07	18.35
135.0	31.33	18.58	17.79	17.40	17.18	17.18	17.51	18.30	19.36
180.0	21.21	18.02	17.40	16.95	16.79	16.79	17.06	18.02	17.79
225.0	28.70	18.07	17.46	17.06	16.90	16.90	17.29	18.02	17.96
270.0	35.81	18.58	17.74	17.29	17.01	17.12	17.90	18.74	21.26
315.0	35.19	18.35	17.68	17.12	16.84	16.67	17.12	17.51	18.13
360.0	40.56	18.58	17.62	17.12	16.90	16.73	16.79	17.06	17.85
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	16.28	16.34	16.34	16.34	16.34	16.28	16.28	16.34	16.45
45.0	16.45	16.45	16.45	16.39	16.39	16.39	16.39	16.39	16.45
90.0	16.28	16.34	16.28	16.34	16.28	16.28	16.28	16.34	16.39
135.0	16.28	16.28	16.34	16.28	16.28	16.23	16.23	16.28	16.39
180.0	16.28	16.28	16.28	16.23	16.23	16.23	16.23	16.28	16.34
225.0	16.39	16.45	16.39	16.45	16.45	16.45	16.45	16.51	16.67
270.0	16.34	16.34	16.39	16.39	16.34	16.34	16.34	16.39	16.51
315.0	16.28	16.34	16.28	16.34	16.28	16.28	16.34	16.34	16.51
360.0	16.28	16.34	16.34	16.34	16.34	16.28	16.28	16.34	16.45
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	16.62	16.90	17.90	20.03	23.39	26.41	28.20	28.81	28.53
45.0	16.45	16.67	17.74	19.81	22.88	25.46	27.30	28.09	28.31
90.0	16.45	16.79	18.02	20.59	23.61	26.13	27.42	28.09	28.37
135.0	16.34	16.67	17.85	19.86	23.00	25.35	26.97	27.64	27.86
180.0	16.34	16.79	17.96	20.37	23.11	25.35	26.69	27.25	27.47
225.0	16.84	17.29	18.63	21.65	25.18	28.09	29.32	29.88	29.49
270.0	16.67	17.01	18.18	20.42	24.28	27.25	28.87	29.49	29.26
315.0	16.67	17.01	18.13	20.87	24.28	27.30	28.65	29.32	28.93
360.0	16.62	16.90	17.90	20.03	23.39	26.41	28.20	28.81	28.53
C/γ(°)	180.0								
0.0	27.75								
45.0	28.70								
90.0	28.70								
135.0	28.31								
180.0	27.75								
225.0	28.70								
270.0	28.70								
315.0	28.31								
360.0	27.75								