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Nata

LumCAT: 2-1316-E	
Luminaire: 92.70.074.00	
Report No: NT2016030203	Voltage(V):
Test No: GC2016030203	Current(A):
LampCAT: CXA1820 3000K	Power (W): 24.3000
Lamp flux(lm): 2200.0	PF:
Number of Lamps: 1	Ballast type:
Length(mm): 58	Width(mm): 58
Phm Type: C	Height(mm): 00

Photometric Results

Lumens(lm): 1923.57
Efficiency(%): 87.44%
Lumens(lm)/Power(W): 79.16
Central intensity(cd): 11340.590
Maximum intensity(cd): 11340.590
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=17.2
 [C90/270]Total=17.2
Field angle(10%Imax): [C0/180]Total=39.0
 [C90/270]Total=39.0
Maximum s/h(1/2): C0_180=0.30 C90_270=0.30
Maximum s/h(1/4): C0_180=0.32 C90_270=0.32
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 87.44%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.516%

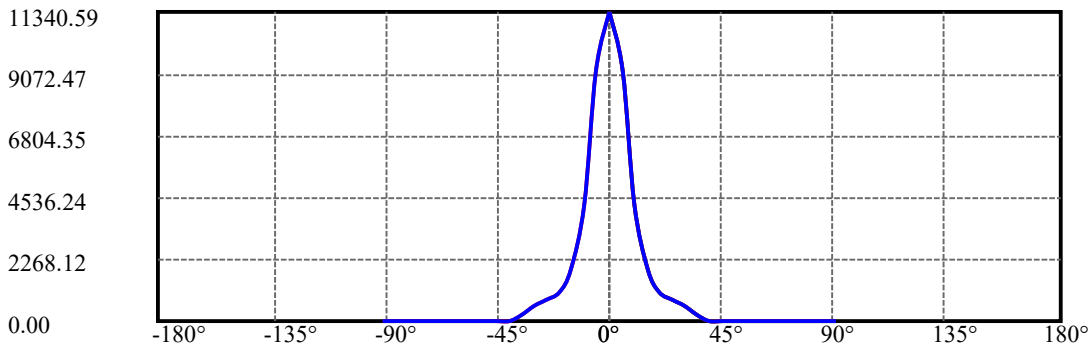
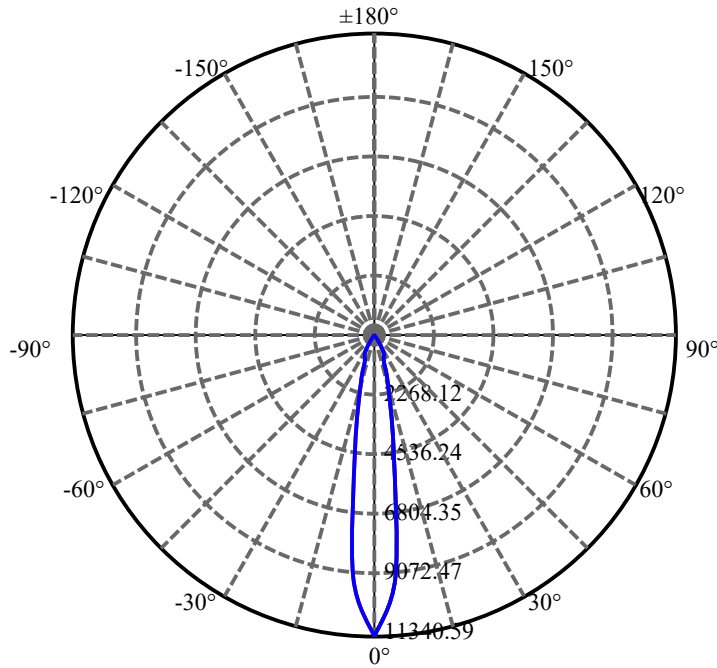
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11340.588	0.000	0	.000%	.000%
5.0	9126.114	244.674	244.674	11.122%	12.720%
10.0	4294.158	480.085	724.759	21.822%	37.678%
15.0	1885.028	366.545	1091.304	16.661%	56.733%
20.0	1047.211	241.658	1332.962	10.984%	69.296%
25.0	781.619	191.810	1524.772	8.719%	79.268%
30.0	595.521	174.278	1699.05	7.922%	88.328%
35.0	242.603	123.420	1822.47	5.610%	94.744%
40.0	30.388	45.546	1868.016	2.070%	97.112%
45.0	18.781	9.104	1877.12	.414%	97.585%
50.0	13.468	6.516	1883.637	.296%	97.924%
55.0	12.357	5.615	1889.252	.255%	98.216%
60.0	12.639	5.778	1895.03	.263%	98.516%
65.0	11.084	5.767	1900.797	.262%	98.816%
70.0	9.552	5.225	1906.022	.238%	99.088%
75.0	8.978	4.843	1910.865	.220%	99.339%
80.0	7.997	4.542	1915.407	.206%	99.575%
85.0	7.333	4.165	1919.573	.189%	99.792%
90.0	7.278	4.001	1923.573	.182%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1699.05	77.23%	88.33%
0-40	1868.02	84.91%	97.11%
0-60	1895.03	86.14%	98.52%
0-90	1919.57	87.25%	99.79%
0-120	1919.57	87.25%	99.79%
0-180	1923.57	87.44%	100.00%
60-90	30.32	1.38%	1.58%
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%
0-25.40	1538.86	69.95%	80.00%

ZONAL LUMEN SUMMARY

0-10	724.76
10-20	608.20
20-30	366.09
30-40	168.97
40-50	15.62
50-60	11.39
60-70	10.99
70-80	9.39
80-90	4.17
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



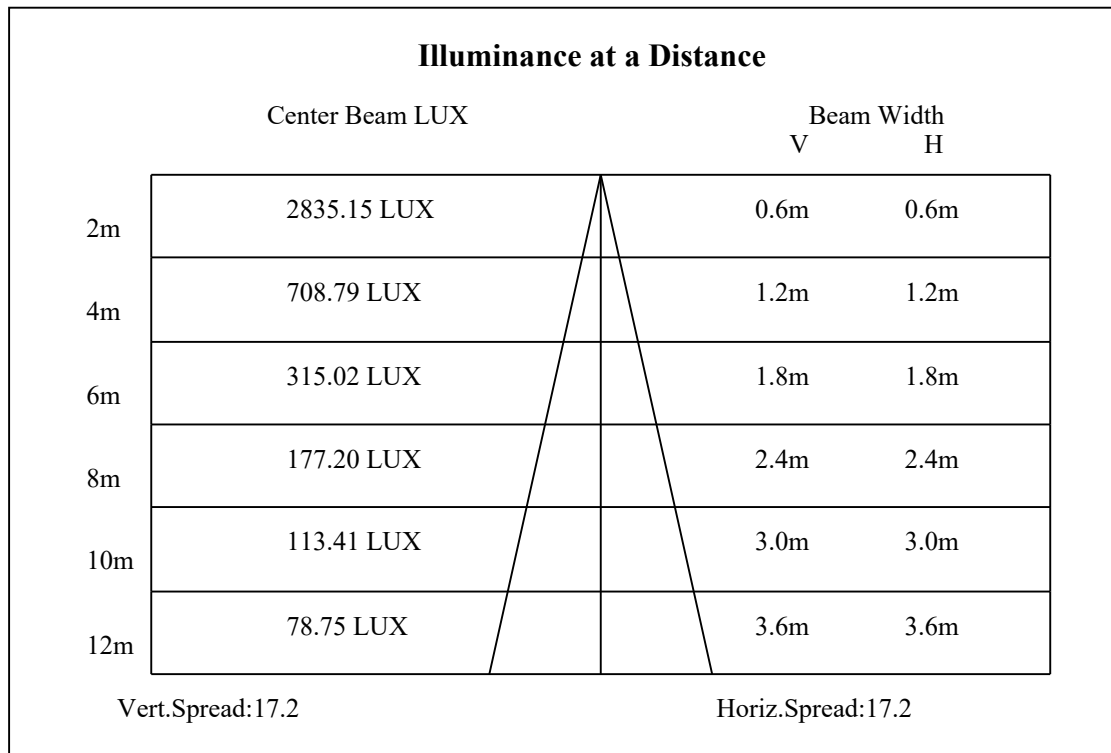
C0(Max): —————

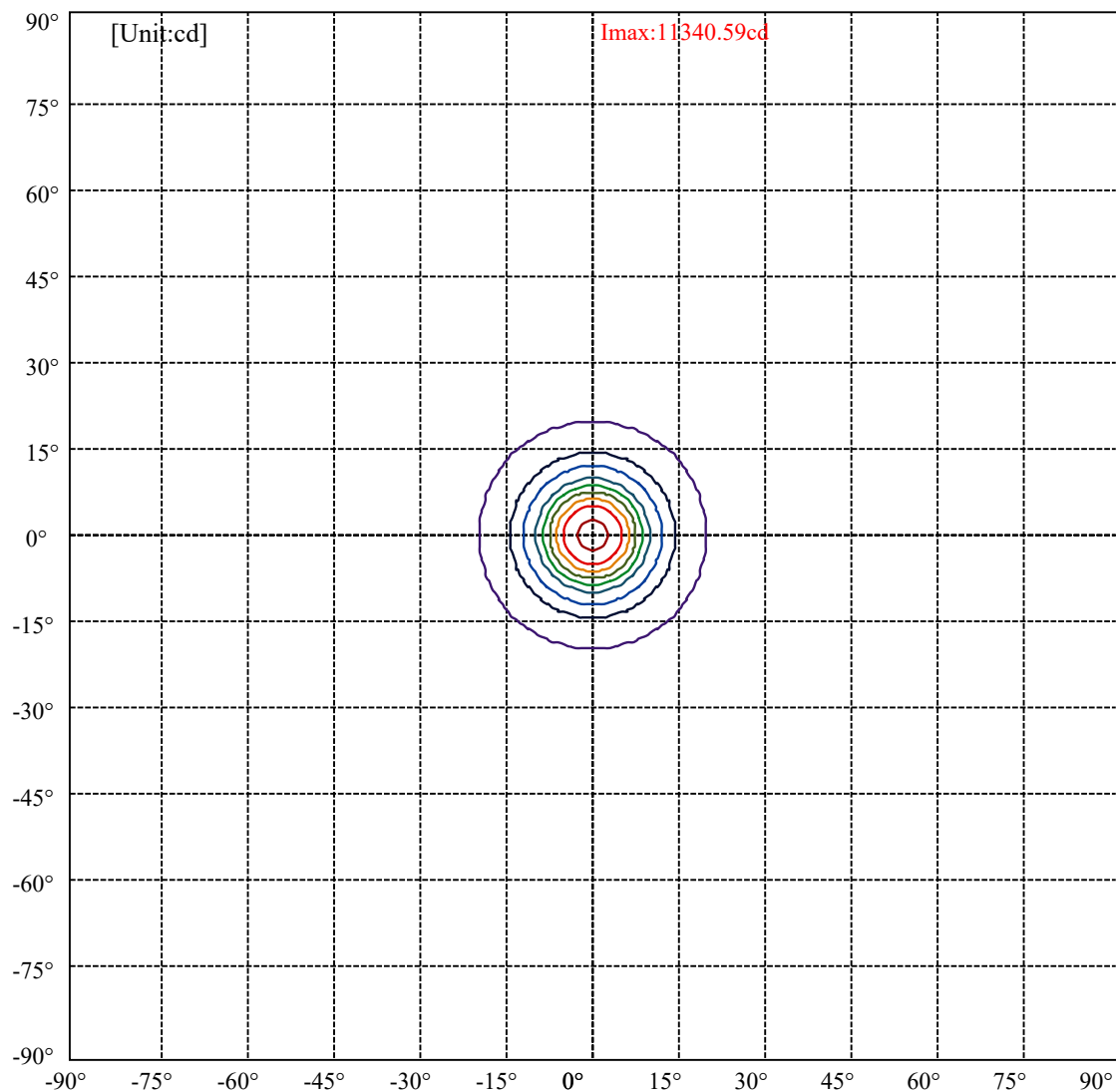
C0/C180: —————

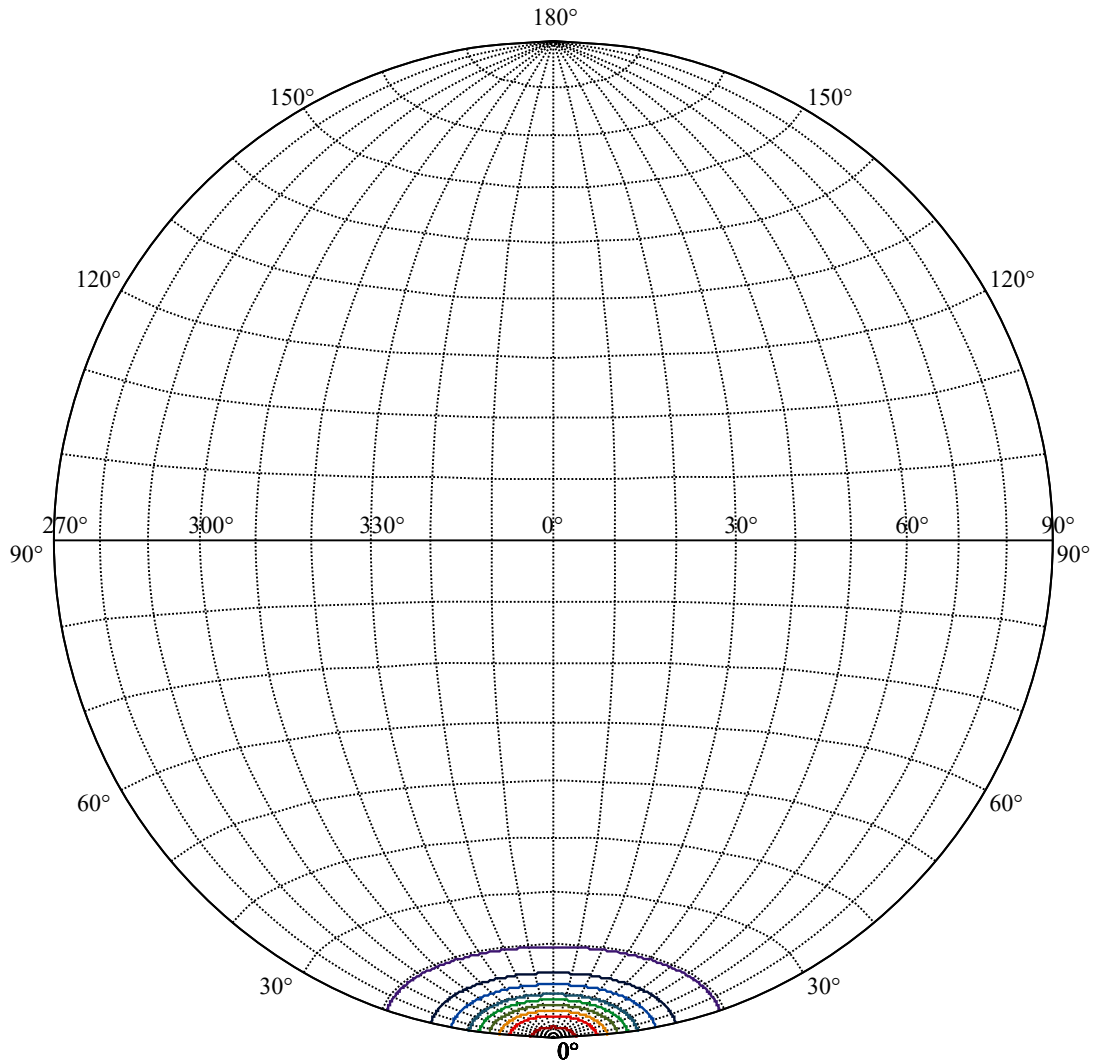
C90/C270: —————

Field angle(10%Imax):C0/180Left:19.5 Right:19.5
:C90/270Left:19.5 Right:19.5

Beam Angle(50%Imax):C0/180Left:8.6 Right:8.6
:C90/270Left:8.6 Right:8.6







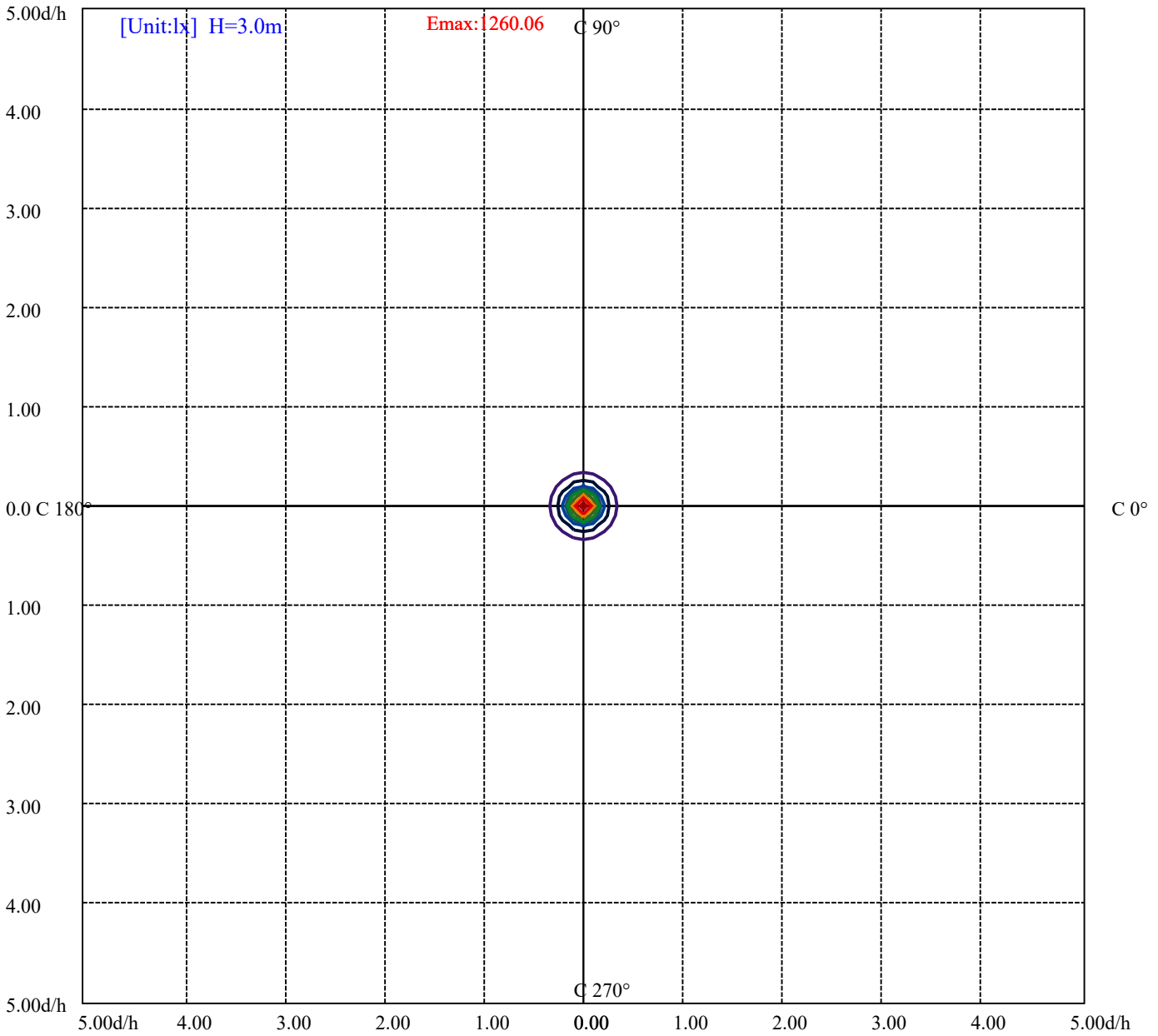
House

[Unit:cd]

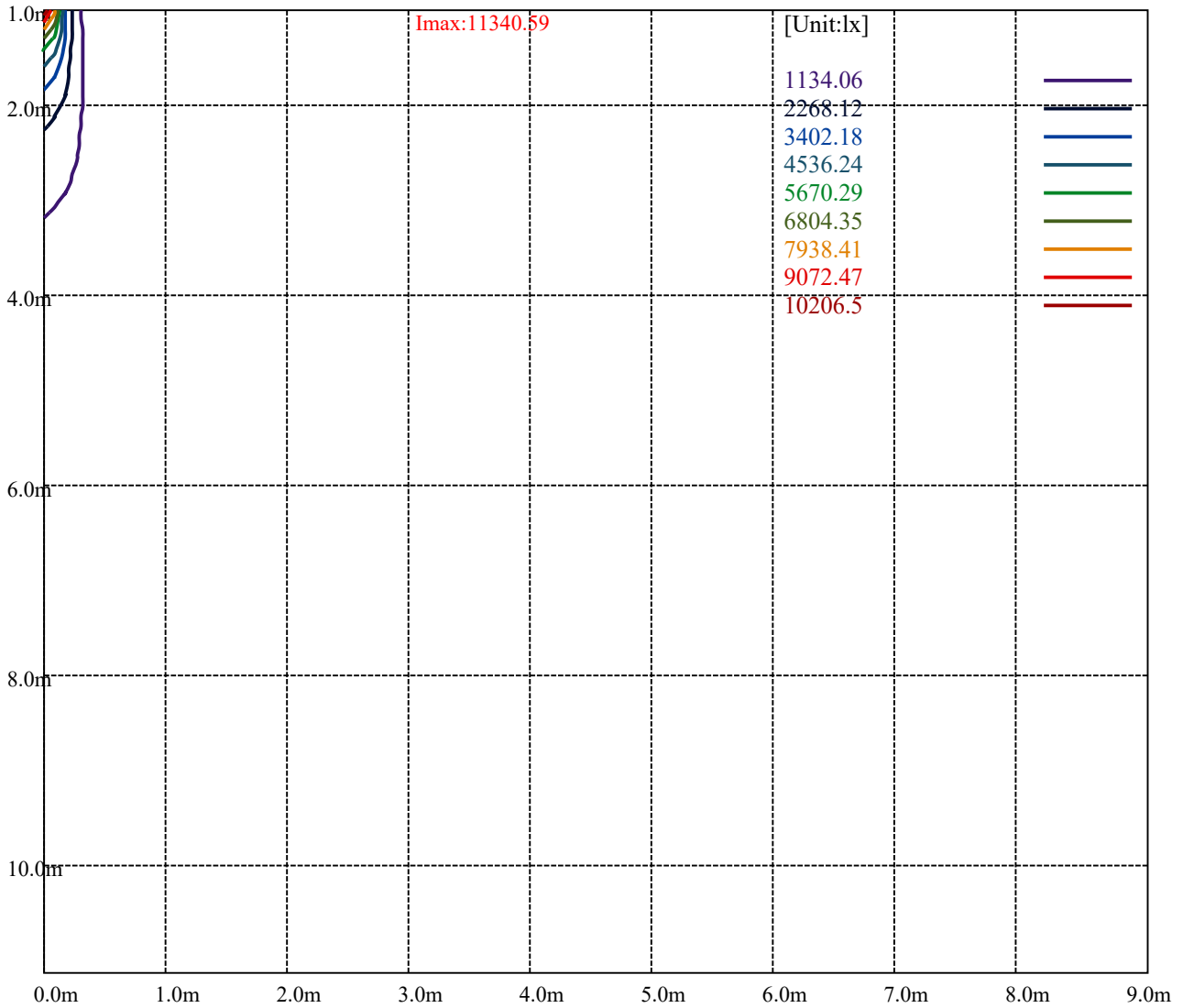
Road

Imax:11340.59

(10%Imax)	1134.06	—
(20%Imax)	2268.12	—
(30%Imax)	3402.18	—
(40%Imax)	4536.24	—
(50%Imax)	5670.29	—
(60%Imax)	6804.35	—
(70%Imax)	7938.41	—
(80%Imax)	9072.47	—
(90%Imax)	10206.5	—



(10%Emax) 126.0056	—
(20%Emax) 252.0111	—
(30%Emax) 378.0178	—
(40%Emax) 504.0233	—
(50%Emax) 630.0289	—
(60%Emax) 756.0344	—
(70%Emax) 882.0411	—
(80%Emax) 1008.047	—
(90%Emax) 1134.056	—



Luminance Table

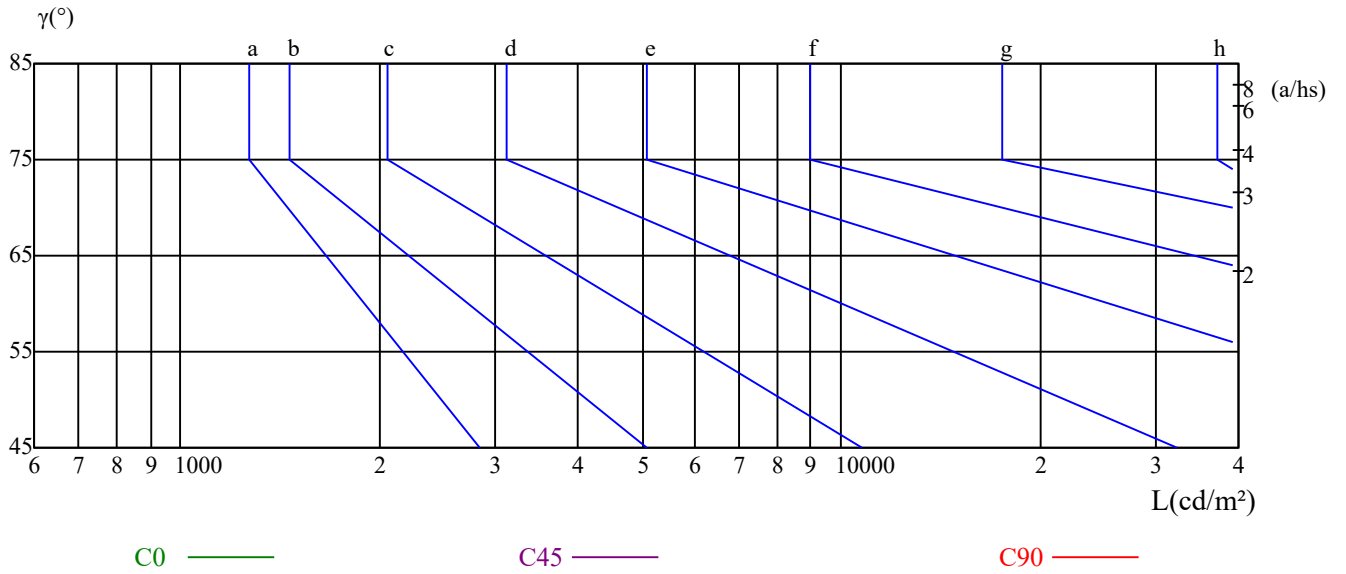
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

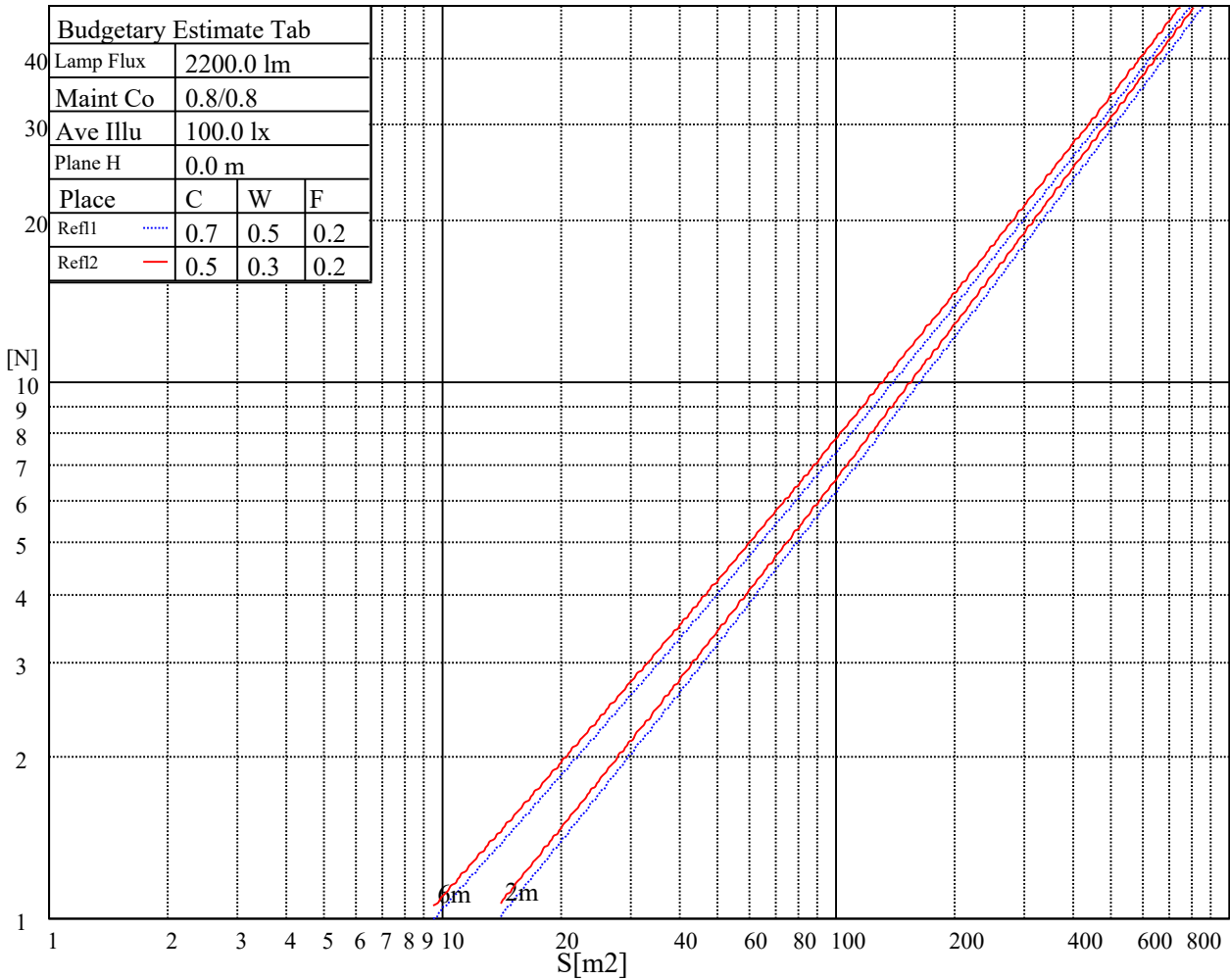
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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 RHOFC=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	0.98	0.96	0.95	0.96	0.95	0.93	0.93	0.91	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.90	0.88	0.92	0.89	0.87	0.89	0.87	0.85	0.86	0.85	0.83	0.84	0.83	0.82	0.80
3	0.89	0.85	0.83	0.88	0.84	0.82	0.85	0.83	0.81	0.83	0.81	0.79	0.82	0.80	0.78	0.77
4	0.85	0.81	0.78	0.84	0.81	0.78	0.82	0.79	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.74
5	0.82	0.78	0.75	0.81	0.77	0.75	0.79	0.76	0.74	0.78	0.75	0.73	0.77	0.75	0.73	0.72
6	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.69
7	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.69	0.73	0.70	0.68	0.73	0.70	0.68	0.67
8	0.73	0.69	0.67	0.73	0.69	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.65
9	0.71	0.67	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.63
10	0.69	0.65	0.63	0.69	0.65	0.63	0.68	0.65	0.63	0.67	0.64	0.62	0.67	0.64	0.62	0.61

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	11556.34	10615.42	5048.12	1968.27	1097.05	787.91	637.83	300.33	31.55
22.5	10894.01	11391.17	6860.03	2824.39	1252.53	850.62	694.26	390.35	51.48
45.0	11567.35	10941.36	5904.80	2266.12	1086.10	819.02	675.10	354.67	35.73
67.5	10977.70	11176.45	6634.30	2818.89	1318.60	864.39	702.52	428.34	53.68
90.0	11506.79	10258.66	4987.56	1983.68	1081.25	822.38	662.88	335.90	34.19
112.5	11622.41	9000.62	3840.18	1811.91	1065.84	797.00	639.54	239.55	27.58
135.0	11583.87	9243.97	4090.69	1902.20	1101.68	817.59	647.46	296.20	26.48
157.5	10988.71	7676.51	3019.84	1516.80	975.71	760.66	534.05	109.40	24.23
180.0	11556.34	7873.07	3264.84	1534.42	1001.48	764.73	561.03	291.80	24.61
202.5	10894.01	6658.52	2521.03	1363.75	893.29	720.58	460.27	69.37	22.35
225.0	11567.35	7261.94	3028.10	1429.26	934.31	739.41	520.83	87.10	23.12
247.5	10977.70	6844.06	2532.59	1085.16	868.13	713.92	428.89	53.41	22.13
270.0	11561.84	7999.70	3226.31	1455.69	955.78	745.46	530.19	184.66	24.28
292.5	11622.41	9431.16	4476.09	1739.78	1003.68	761.98	602.32	298.41	27.47
315.0	11583.87	9090.91	3821.47	1586.18	988.54	746.90	572.70	137.70	25.33
337.5	10988.71	10554.31	5450.58	2873.94	1131.41	793.36	658.48	304.46	31.99
360.0	11556.34	10615.42	5048.12	1968.27	1097.05	787.91	637.83	300.33	31.55
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	20.92	13.82	12.39	12.55	12.11	9.80	9.25	8.37	7.38
22.5	21.80	15.58	12.55	12.50	12.83	10.08	9.36	8.75	7.43
45.0	21.80	14.70	12.55	12.77	12.44	9.86	9.31	8.53	7.21
67.5	22.52	15.64	12.66	12.55	12.88	9.91	9.31	8.64	7.27
90.0	20.92	14.21	12.44	12.77	11.56	9.47	8.97	8.15	7.16
112.5	18.88	13.32	12.39	12.88	10.90	9.53	8.97	7.93	7.38
135.0	18.17	12.99	12.17	12.50	10.68	9.53	9.03	7.87	7.49
157.5	16.90	12.50	12.11	12.50	10.13	9.19	8.64	7.65	7.38
180.0	17.51	12.88	12.39	12.94	10.35	9.31	8.75	7.76	7.38
202.5	15.14	12.55	12.44	12.72	9.86	9.14	8.59	7.54	7.27
225.0	17.18	12.72	12.55	12.88	10.19	9.36	8.75	7.65	7.27
247.5	15.75	12.44	12.44	12.77	9.86	9.19	8.59	7.49	7.16
270.0	17.34	12.66	12.22	12.72	10.30	9.31	8.70	7.60	7.16
292.5	19.44	13.49	12.33	12.72	11.29	9.69	9.08	7.98	7.49
315.0	16.90	12.61	11.95	12.28	10.57	9.58	9.08	7.82	7.43
337.5	19.33	13.38	12.11	12.17	11.40	9.91	9.25	8.20	7.49
360.0	20.92	13.82	12.39	12.55	12.11	9.80	9.25	8.37	7.38
C/γ(°)	90.0								
0.0	7.32								
22.5	7.32								
45.0	7.21								
67.5	7.16								
90.0	7.10								
112.5	7.38								
135.0	7.43								
157.5	7.38								
180.0	7.32								
202.5	7.27								
225.0	7.21								
247.5	7.10								
270.0	7.10								
292.5	7.38								
315.0	7.38								
337.5	7.38								
360.0	7.32								