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Nata

LumCAT: NA01D020045BW

Luminaire:

Report No: 200402-B008

Voltage(V): 6.2100

Test No: 200402-C008

Current(A): 0.1590

LampCAT: CREE 3030

Power (W): 0.9870

Lamp flux(lm): 141.9

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): 133.58

Efficiency(%): 94.17%

Lumens(lm)/Power(W): 135.34

Central intensity(cd): 162.450

Maximum intensity(cd): 162.450

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=45.6

[C90/270]Total=45.6

Field angle(10%Imax): [C0/180]Total=92.2

[C90/270]Total=92.2

Maximum s/h(1/2): C0_180=0.71 C90_270=0.71

Maximum s/h(1/4): C0_180=0.76 C90_270=0.76

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.17%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 93.786%

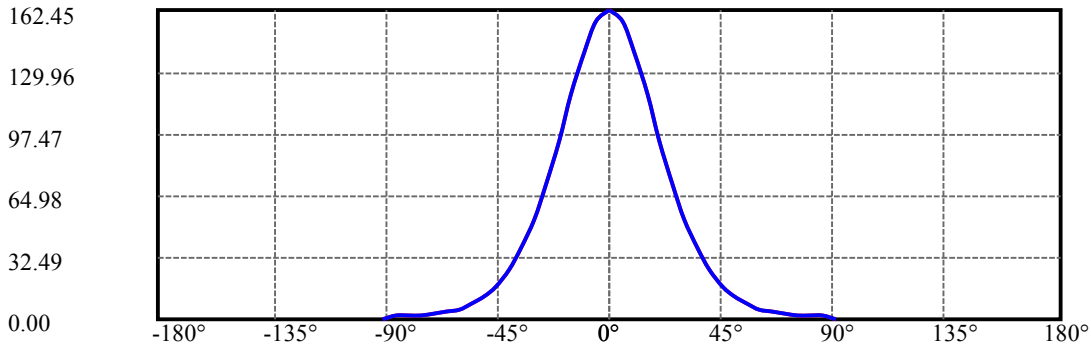
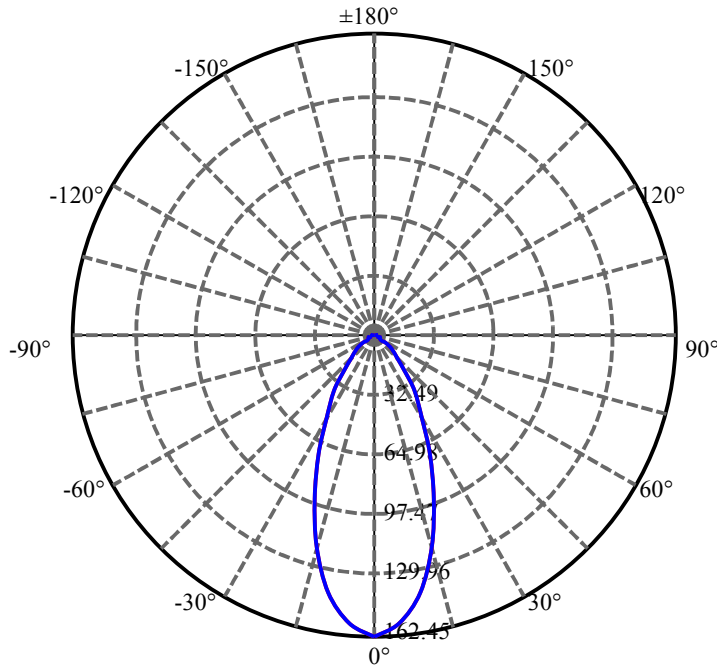
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	162.450	0.000	0	.000%	.000%
5.0	156.178	3.809	3.809	2.685%	2.852%
10.0	140.576	10.616	14.425	7.483%	10.799%
15.0	118.252	15.353	29.778	10.823%	22.292%
20.0	93.959	17.489	47.267	12.328%	35.384%
25.0	71.051	17.306	64.574	12.200%	48.340%
30.0	52.692	15.660	80.234	11.039%	60.063%
35.0	37.230	13.242	93.475	9.334%	69.976%
40.0	26.135	10.572	104.048	7.452%	77.890%
45.0	17.529	8.085	112.132	5.699%	83.942%
50.0	11.714	5.909	118.041	4.165%	88.366%
55.0	7.699	4.221	122.262	2.976%	91.526%
60.0	5.365	3.020	125.282	2.129%	93.786%
65.0	3.755	2.217	127.499	1.563%	95.446%
70.0	2.904	1.686	129.185	1.188%	96.708%
75.0	2.510	1.415	130.6	.998%	97.767%
80.0	2.278	1.281	131.881	.903%	98.726%
85.0	1.737	1.091	132.972	.769%	99.543%
90.0	0.492	0.610	133.583	.430%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	80.23	56.56%	60.06%
0-40	104.05	73.35%	77.89%
0-60	125.28	88.31%	93.79%
0-90	132.97	93.73%	99.54%
0-120	132.97	93.73%	99.54%
0-180	133.58	94.17%	100.00%
60-90	10.71	7.55%	8.02%
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%
0-41.74	106.87	75.33%	80.00%

ZONAL LUMEN SUMMARY

0-10	14.42
10-20	32.84
20-30	32.97
30-40	23.81
40-50	13.99
50-60	7.24
60-70	3.90
70-80	2.70
80-90	1.09
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

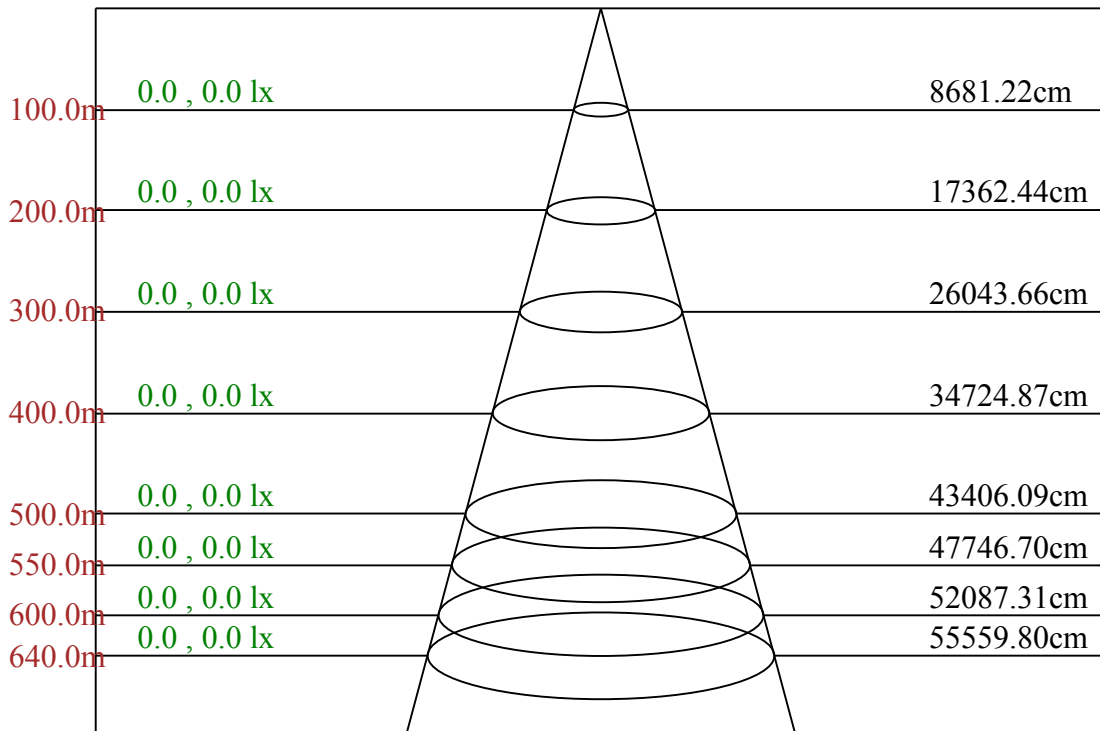


C0/C180: —

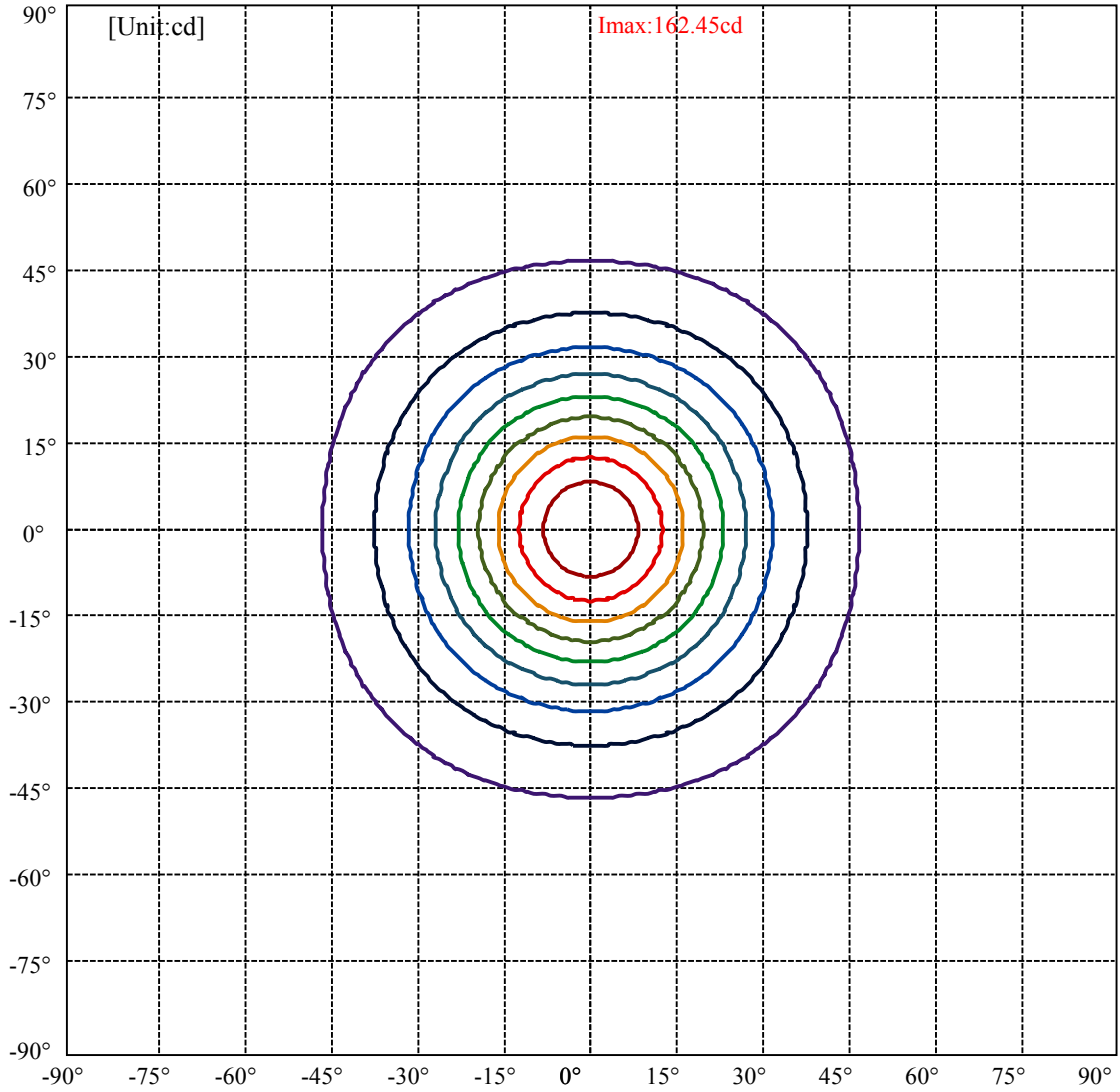
C90/C270: —

Field angle(10%Imax):C0/180Left:46.1 Right:46.1
:C90/270Left:46.1 Right:46.1

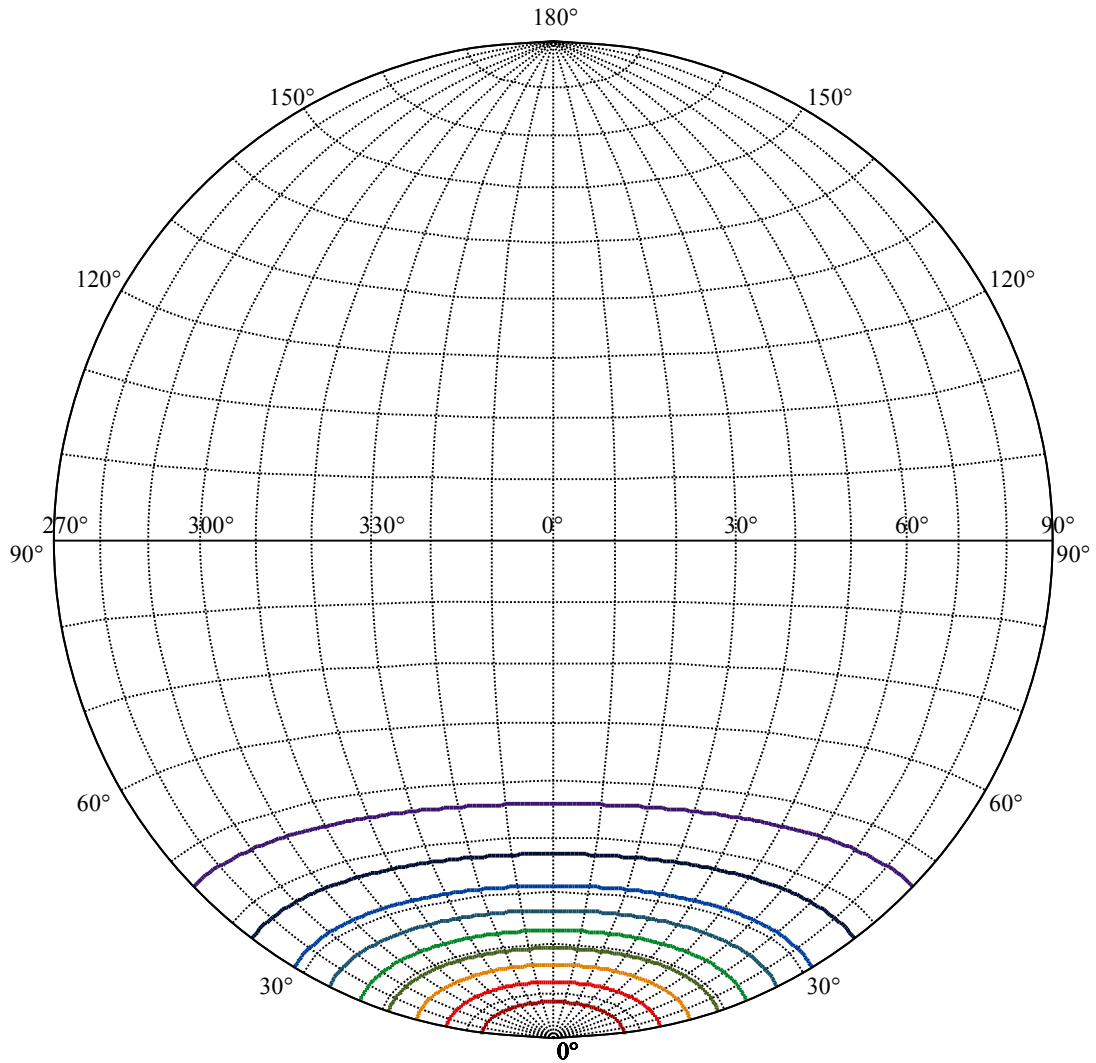
Beam Angle(50%Imax):C0/180Left:22.8 Right:22.8
:C90/270Left:22.8 Right:22.8



Max , Ave Beam angle of C0 plane 46.93



(10%Imax) 16.245	—
(20%Imax) 32.49	—
(30%Imax) 48.735	—
(40%Imax) 64.98	—
(50%Imax) 81.225	—
(60%Imax) 97.47	—
(70%Imax) 113.715	—
(80%Imax) 129.96	—
(90%Imax) 146.205	—



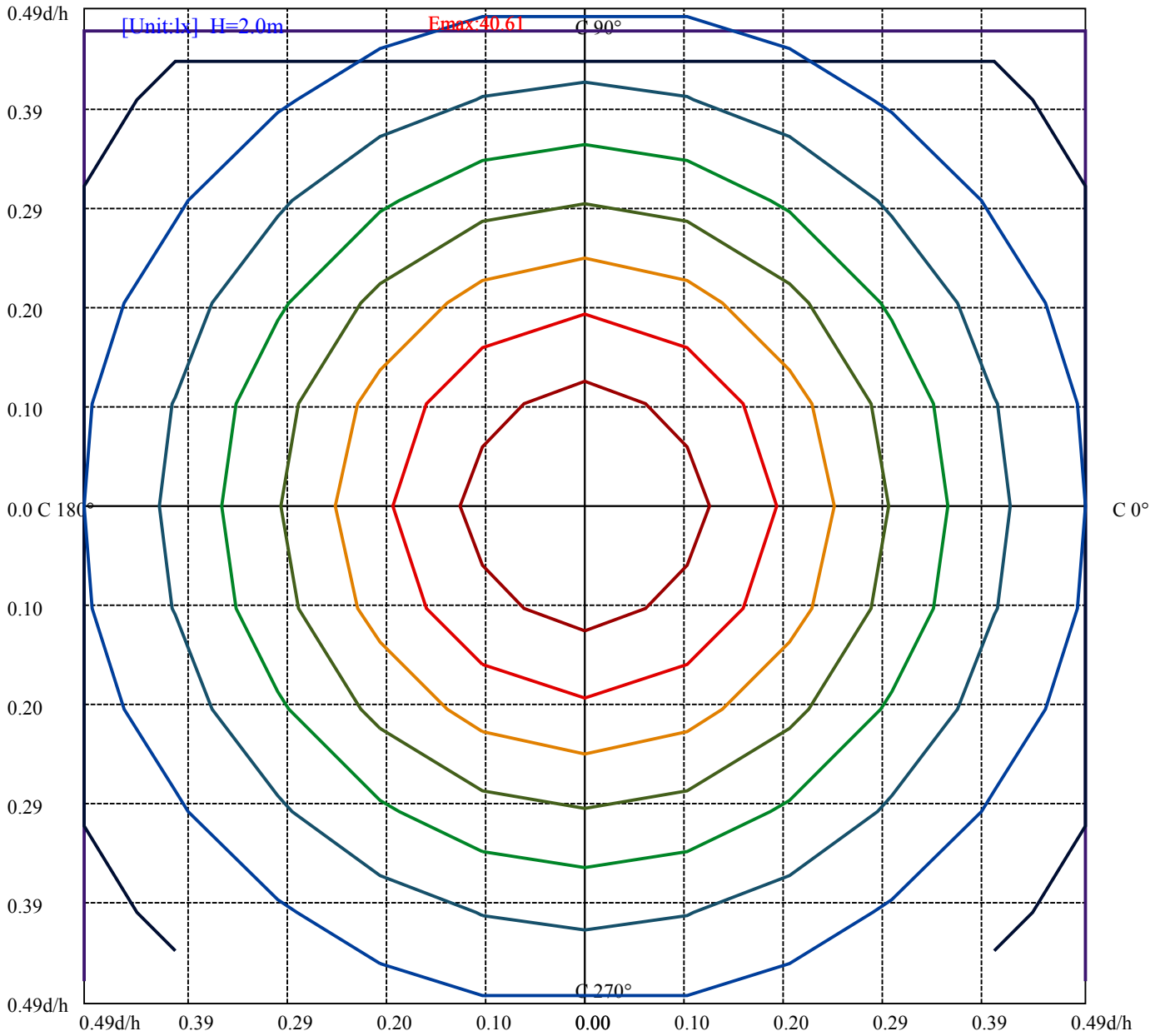
House

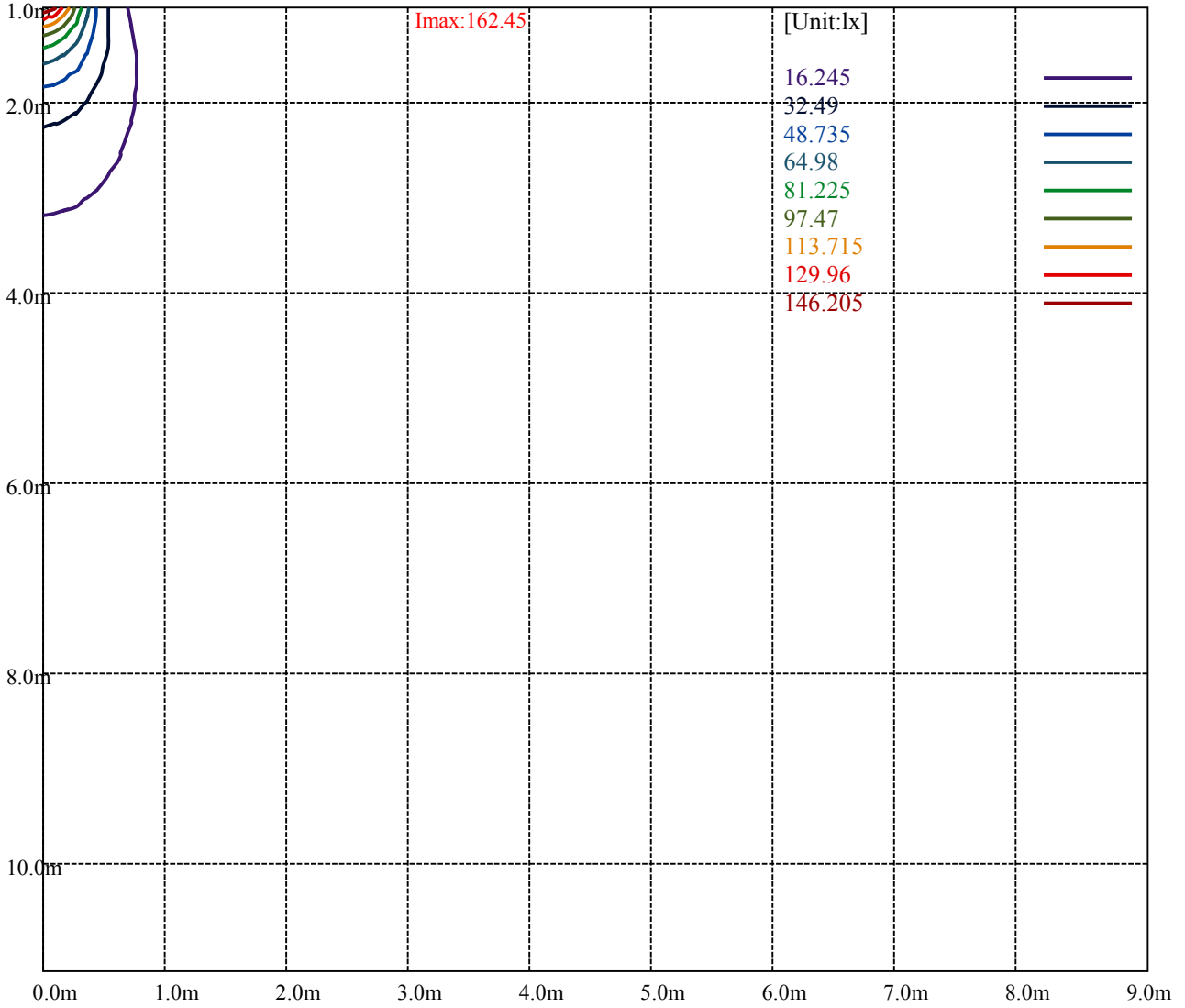
[Unit:cd]

Road

I_{max}:162.45

(10%I _{max}) 16.245	—
(20%I _{max}) 32.49	—
(30%I _{max}) 48.735	—
(40%I _{max}) 64.98	—
(50%I _{max}) 81.225	—
(60%I _{max}) 97.47	—
(70%I _{max}) 113.715	—
(80%I _{max}) 129.96	—
(90%I _{max}) 146.205	—





Luminance Table

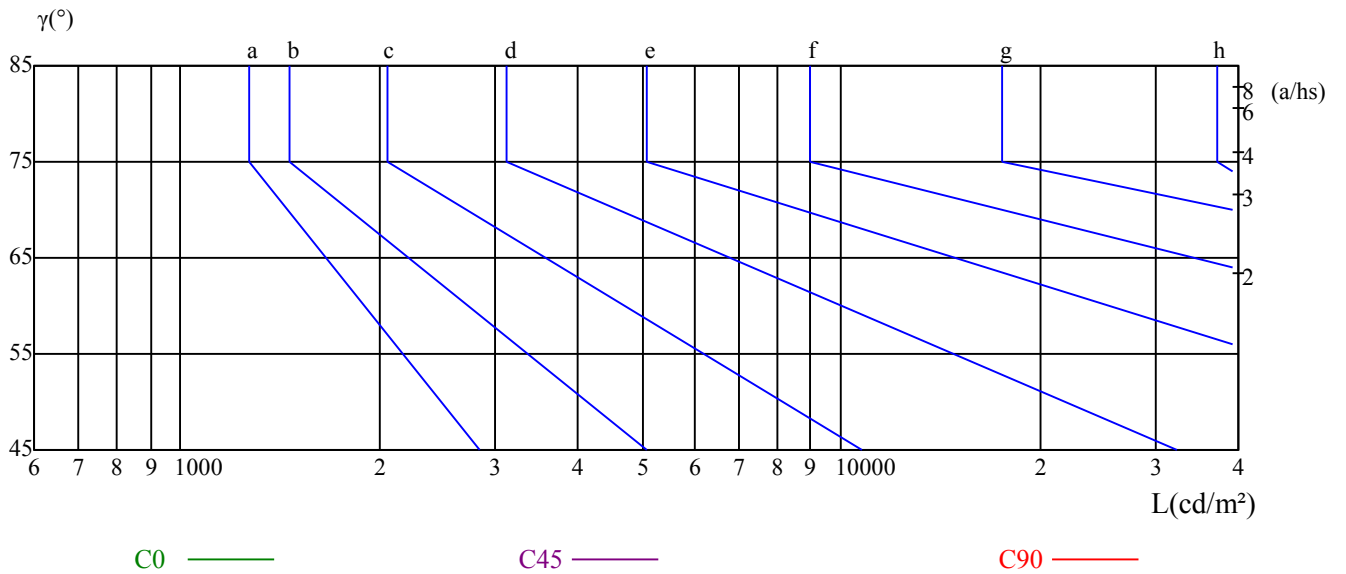
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

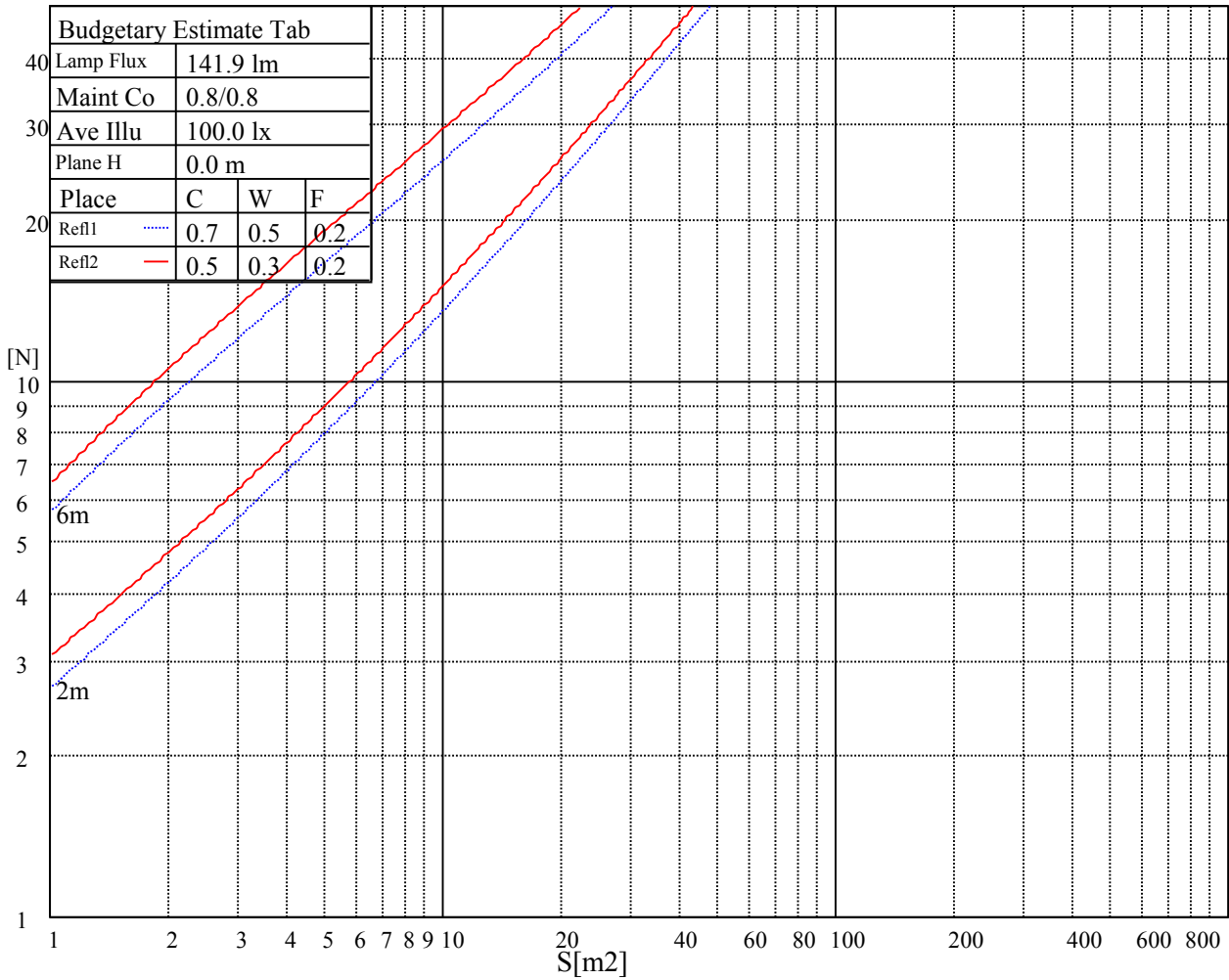
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

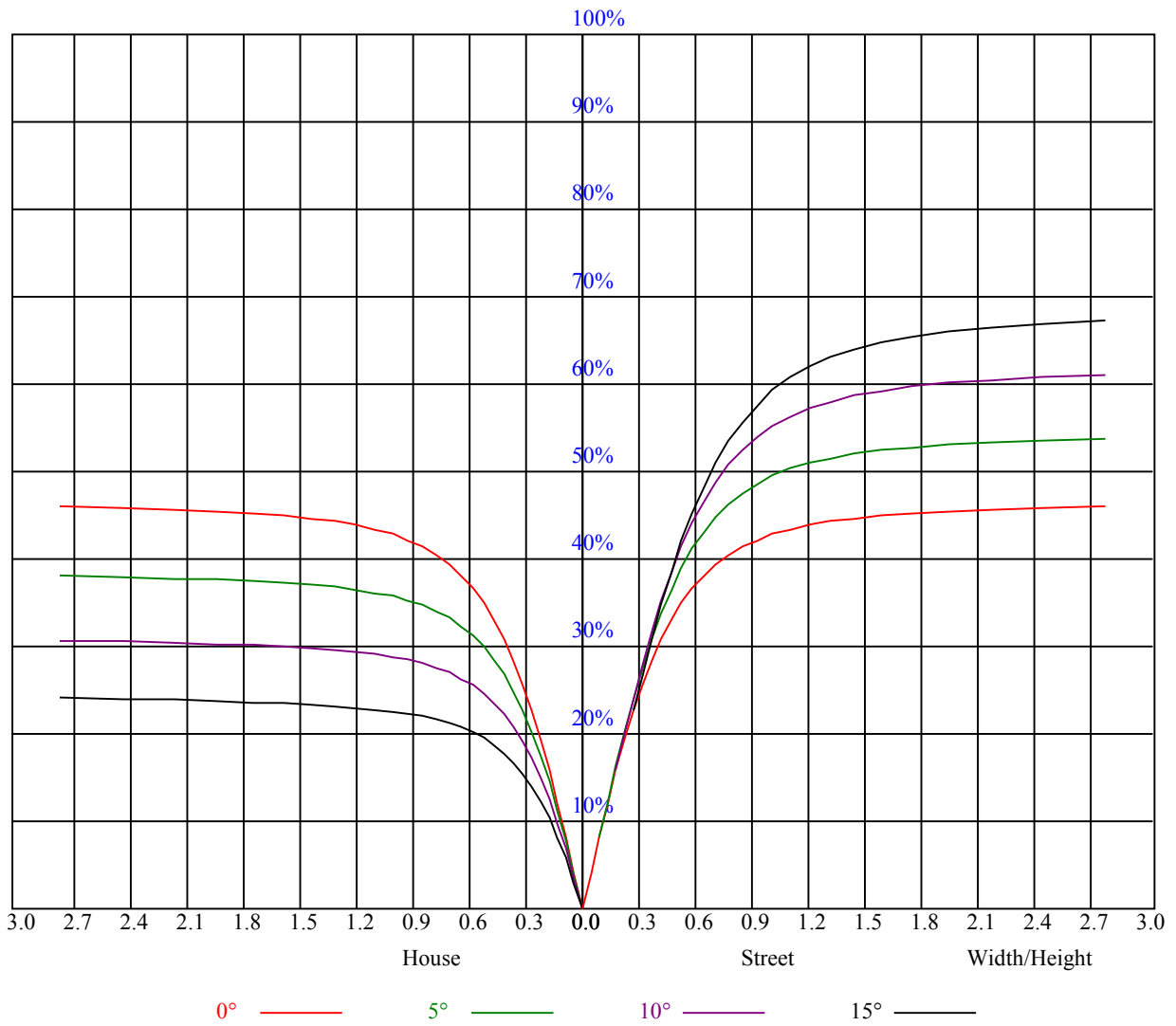
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.12	1.12	1.12	1.09	1.09	1.09	1.05	1.05	1.05	1.00	1.00	1.00	0.96	0.96	0.96	0.94
1	1.02	0.99	0.97	1.00	0.98	0.95	0.96	0.94	0.92	0.93	0.91	0.90	0.90	0.88	0.87	0.85
2	0.94	0.89	0.85	0.92	0.88	0.84	0.89	0.86	0.83	0.86	0.83	0.81	0.83	0.81	0.79	0.77
3	0.86	0.81	0.77	0.85	0.80	0.76	0.82	0.78	0.75	0.80	0.76	0.73	0.78	0.75	0.72	0.71
4	0.80	0.74	0.69	0.79	0.73	0.69	0.77	0.72	0.68	0.75	0.71	0.67	0.73	0.69	0.66	0.65
5	0.74	0.68	0.63	0.73	0.67	0.63	0.72	0.66	0.62	0.70	0.65	0.62	0.68	0.64	0.61	0.60
6	0.69	0.63	0.58	0.68	0.62	0.58	0.67	0.62	0.58	0.66	0.61	0.57	0.64	0.60	0.57	0.55
7	0.65	0.58	0.54	0.64	0.58	0.54	0.63	0.57	0.54	0.62	0.57	0.53	0.61	0.56	0.53	0.52
8	0.61	0.55	0.50	0.60	0.54	0.50	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.48
9	0.57	0.51	0.47	0.57	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.45
10	0.54	0.48	0.44	0.54	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.42



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	164.31	157.16	140.79	117.51	93.49	70.65	52.99	37.74	26.38
45.0	161.49	156.88	142.14	121.44	98.27	74.93	56.36	39.49	27.84
90.0	161.55	156.43	143.55	121.61	97.76	74.64	54.79	38.98	28.01
135.0	162.45	160.37	145.97	126.90	101.64	77.06	58.39	42.02	29.81
180.0	164.31	157.89	142.31	118.07	93.71	71.38	52.93	37.58	25.71
225.0	161.49	154.58	138.38	113.79	89.21	66.88	48.71	33.98	23.79
270.0	161.55	154.69	137.14	116.55	91.01	67.73	49.95	35.16	24.53
315.0	162.45	151.43	134.33	110.14	86.57	65.14	47.42	32.91	23.01
360.0	164.31	157.16	140.79	117.51	93.49	70.65	52.99	37.74	26.38
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	17.89	11.98	8.10	5.85	4.05	3.09	2.64	2.48	2.03
45.0	18.34	12.60	8.21	5.63	4.05	3.09	2.64	2.42	2.14
90.0	18.39	12.15	7.88	5.51	3.83	2.93	2.59	2.31	1.97
135.0	20.53	13.22	8.44	5.74	3.94	3.04	2.53	2.25	1.80
180.0	17.72	11.98	7.76	5.40	3.60	2.81	2.36	2.14	1.46
225.0	15.58	10.35	6.98	4.89	3.49	2.81	2.53	2.31	1.46
270.0	16.20	10.97	7.20	4.89	3.49	2.64	2.25	2.03	1.18
315.0	15.58	10.46	7.03	5.01	3.60	2.81	2.53	2.31	1.86
360.0	17.89	11.98	8.10	5.85	4.05	3.09	2.64	2.48	2.03
C/ γ (°)	90.0								
0.0	0.62								
45.0	0.62								
90.0	0.51								
135.0	0.45								
180.0	0.45								
225.0	0.39								
270.0	0.45								
315.0	0.45								
360.0	0.62								