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Nata

LumCAT: 3-1915-E
Luminaire: 99.02.73.180+92.76.323.00
Report No: GC2016120901
Test No: NT-0010
LampCAT: CREE CXA1830
Lamp flux(lm): 2002.0
Number of Lamps: 1
Length(mm): 79
Phm Type: C

Voltage(V):
Current(A):
Power (W): 19.6000
PF:
Ballast type:
Width(mm): 79
Height(mm): 0

Photometric Results

Lumens(lm): 1857.26
Efficiency(%): 92.77%
Lumens(lm)/Power(W): 94.75
Central intensity(cd): 7757.440
Maximum intensity(cd): 7757.440
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=14.5
 [C90/270]Total=14.5
Field angle(10%Imax): [C0/180]Total=29.6
 [C90/270]Total=29.6
Maximum s/h(1/2): C0_180=0.25 C90_270=0.25
Maximum s/h(1/4): C0_180=0.25 C90_270=0.25
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 92.77%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.682%

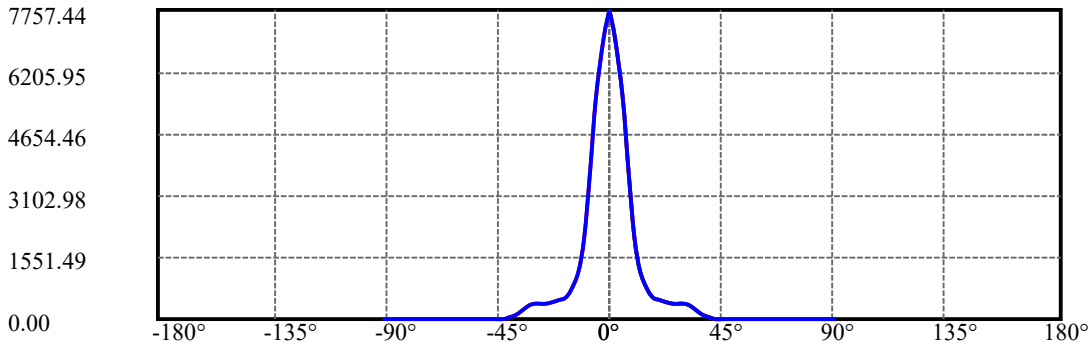
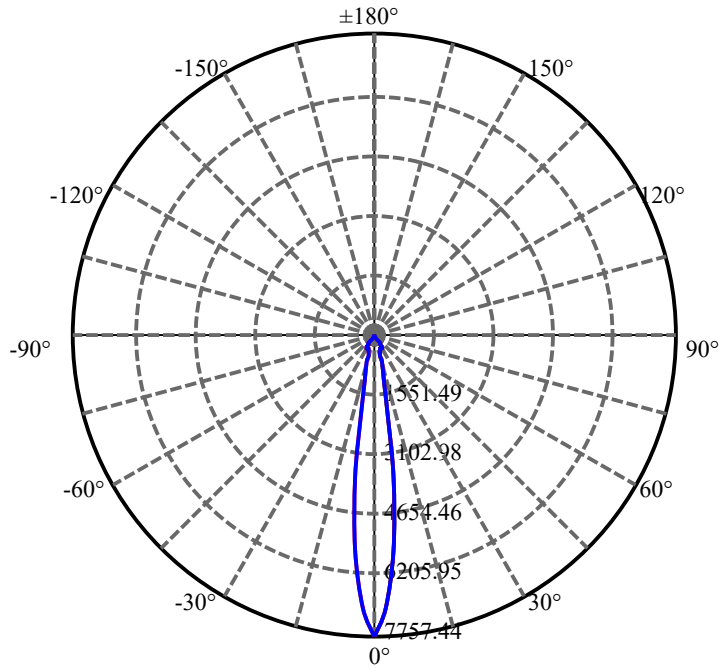
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7757.440	0.000	0	.000%	.000%
2.5	7037.021	44.237	44.237	4.104%	4.424%
5.0	5544.009	112.784	157.021	10.462%	15.702%
7.5	3694.326	137.855	294.876	12.788%	29.488%
10.0	2085.400	120.514	415.39	11.180%	41.539%
12.5	1191.297	87.620	503.01	8.128%	50.301%
15.0	738.639	62.875	565.885	5.833%	56.589%
17.5	552.530	49.523	615.408	4.594%	61.541%
20.0	469.511	45.030	660.438	4.177%	66.044%
22.5	428.256	44.600	705.038	4.137%	70.504%
25.0	404.218	45.955	750.993	4.263%	75.099%
27.5	384.241	47.799	798.792	4.434%	79.879%
30.0	362.544	49.234	848.025	4.567%	84.803%
32.5	317.246	48.338	896.363	4.484%	89.636%
35.0	216.314	40.631	936.994	3.769%	93.699%
37.5	112.778	26.673	963.666	2.474%	96.367%
40.0	29.330	12.192	975.858	1.131%	97.586%
42.5	9.175	3.480	979.338	.323%	97.934%
45.0	5.733	1.413	980.751	.131%	98.075%
47.5	4.903	1.053	981.804	.098%	98.180%
50.0	4.710	0.991	982.795	.092%	98.280%
52.5	4.569	0.992	983.787	.092%	98.379%
55.0	4.465	0.999	984.785	.093%	98.479%
57.5	4.399	1.010	985.796	.094%	98.580%
60.0	4.328	1.023	986.818	.095%	98.682%
62.5	4.288	1.035	987.854	.096%	98.785%
65.0	4.254	1.050	988.904	.097%	98.890%
67.5	4.221	1.063	989.967	.099%	98.997%
70.0	4.210	1.077	991.044	.100%	99.104%
72.5	4.191	1.090	992.134	.101%	99.213%
75.0	4.184	1.102	993.236	.102%	99.324%
77.5	4.173	1.113	994.349	.103%	99.435%
80.0	4.165	1.121	995.47	.104%	99.547%
82.5	4.158	1.127	996.597	.105%	99.660%
85.0	4.154	1.132	997.73	.105%	99.773%
87.5	4.143	1.135	998.865	.105%	99.886%
90.0	4.143	1.135	1000	.105%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	848.03	42.36%	84.80%
0-40	975.86	48.74%	97.59%
0-60	986.82	49.29%	98.68%
0-90	998.86	49.89%	99.89%
0-120	998.86	49.89%	99.89%
0-180	1000.00	49.95%	100.00%
60-90	13.07	0.65%	1.31%
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%
0-27.56	800.00	39.96%	80.00%

ZONAL LUMEN SUMMARY

0-10	415.39
10-20	245.05
20-30	187.59
30-40	127.83
40-50	6.94
50-60	4.02
60-70	4.23
70-80	4.43
80-90	3.39
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: —————

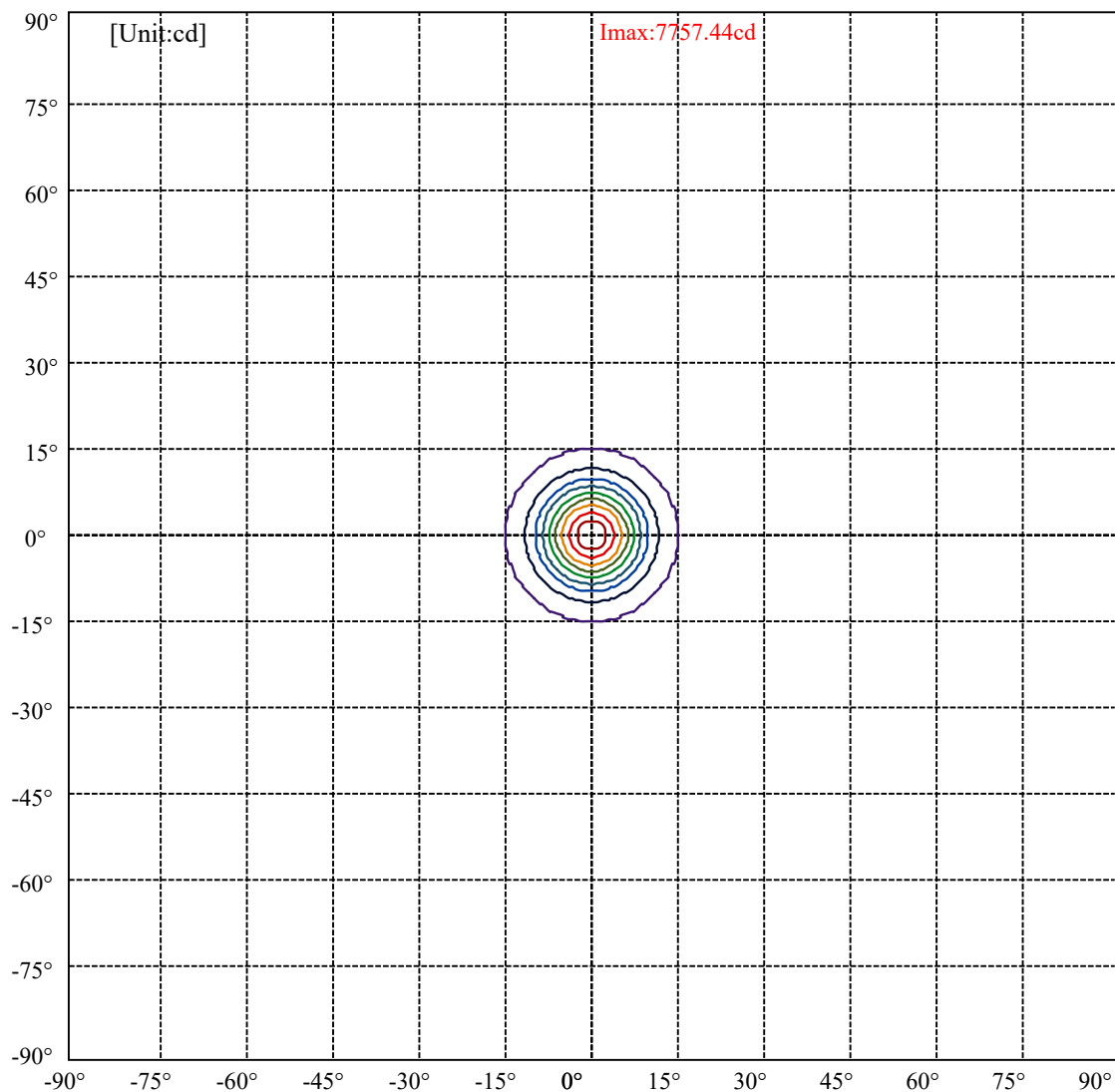
C90/C270: —————

Field angle(10%Imax):C0/180Left:14.8 Right:14.8

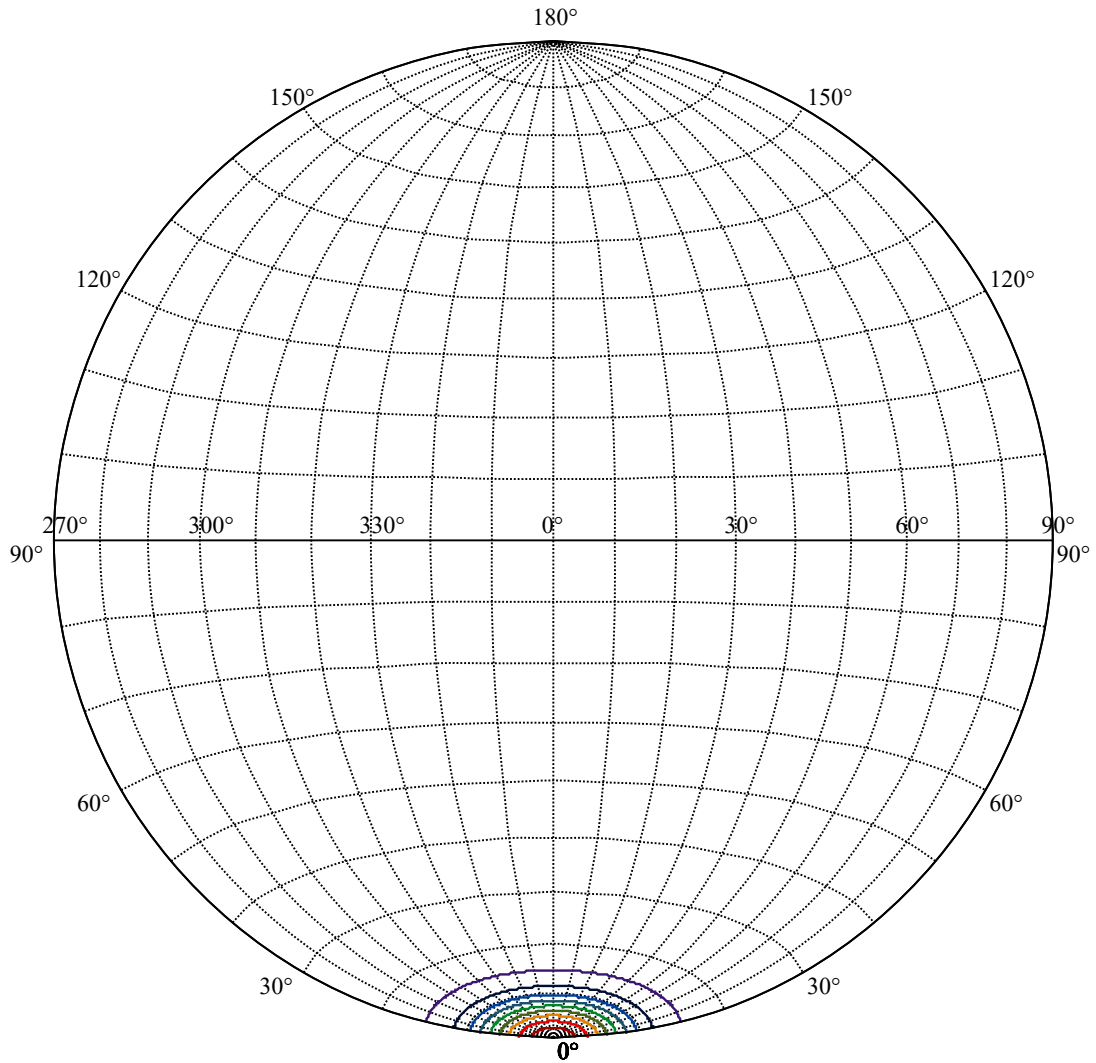
:C90/270Left:14.8 Right:14.8

Beam Angle(50%Imax):C0/180Left:7.3 Right:7.3

:C90/270Left:7.3 Right:7.3



(10%Imax) 775.744	—
(20%Imax) 1551.49	—
(30%Imax) 2327.23	—
(40%Imax) 3102.98	—
(50%Imax) 3878.72	—
(60%Imax) 4654.46	—
(70%Imax) 5430.21	—
(80%Imax) 6205.95	—
(90%Imax) 6981.7	—



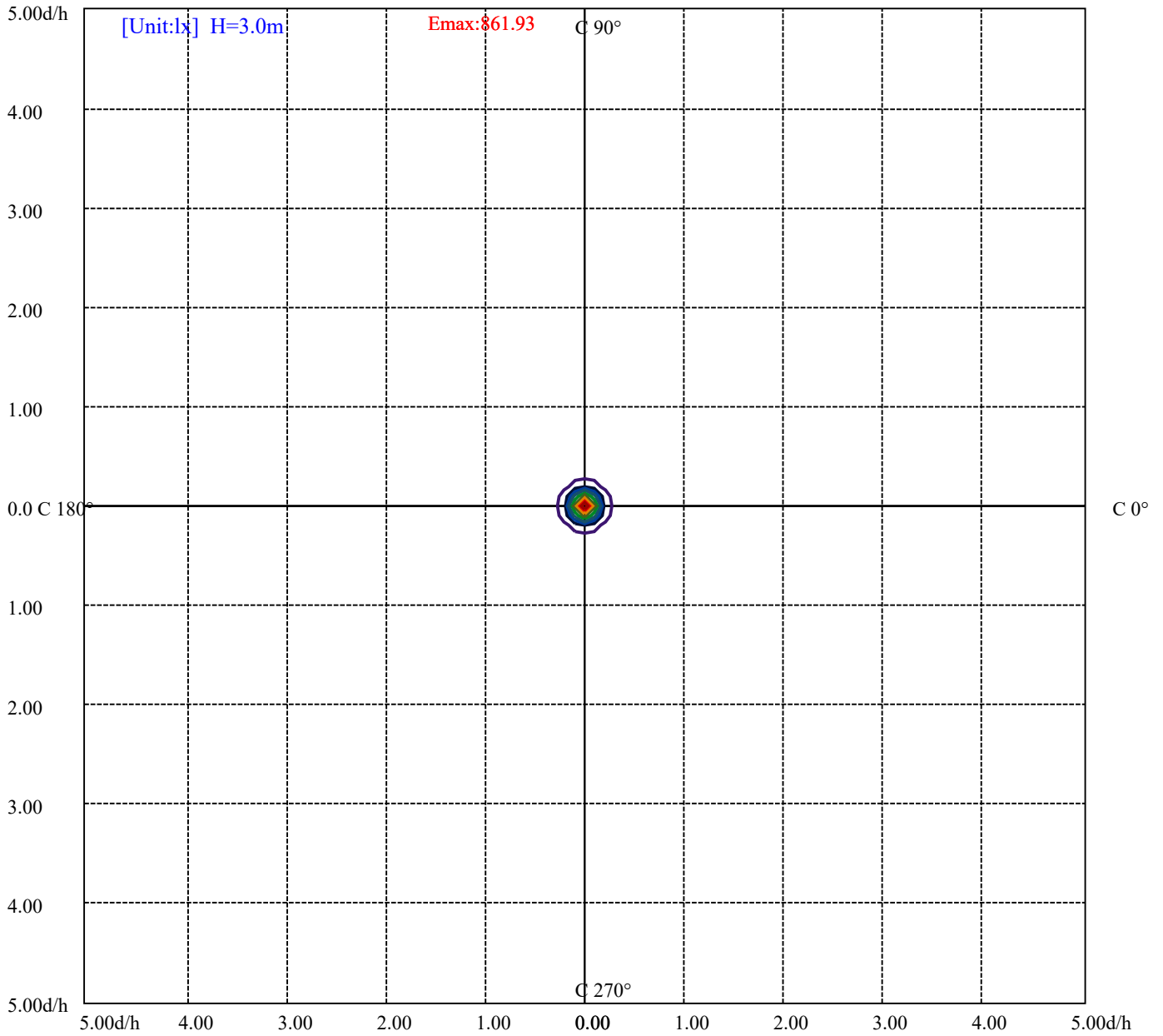
House

[Unit:cd]

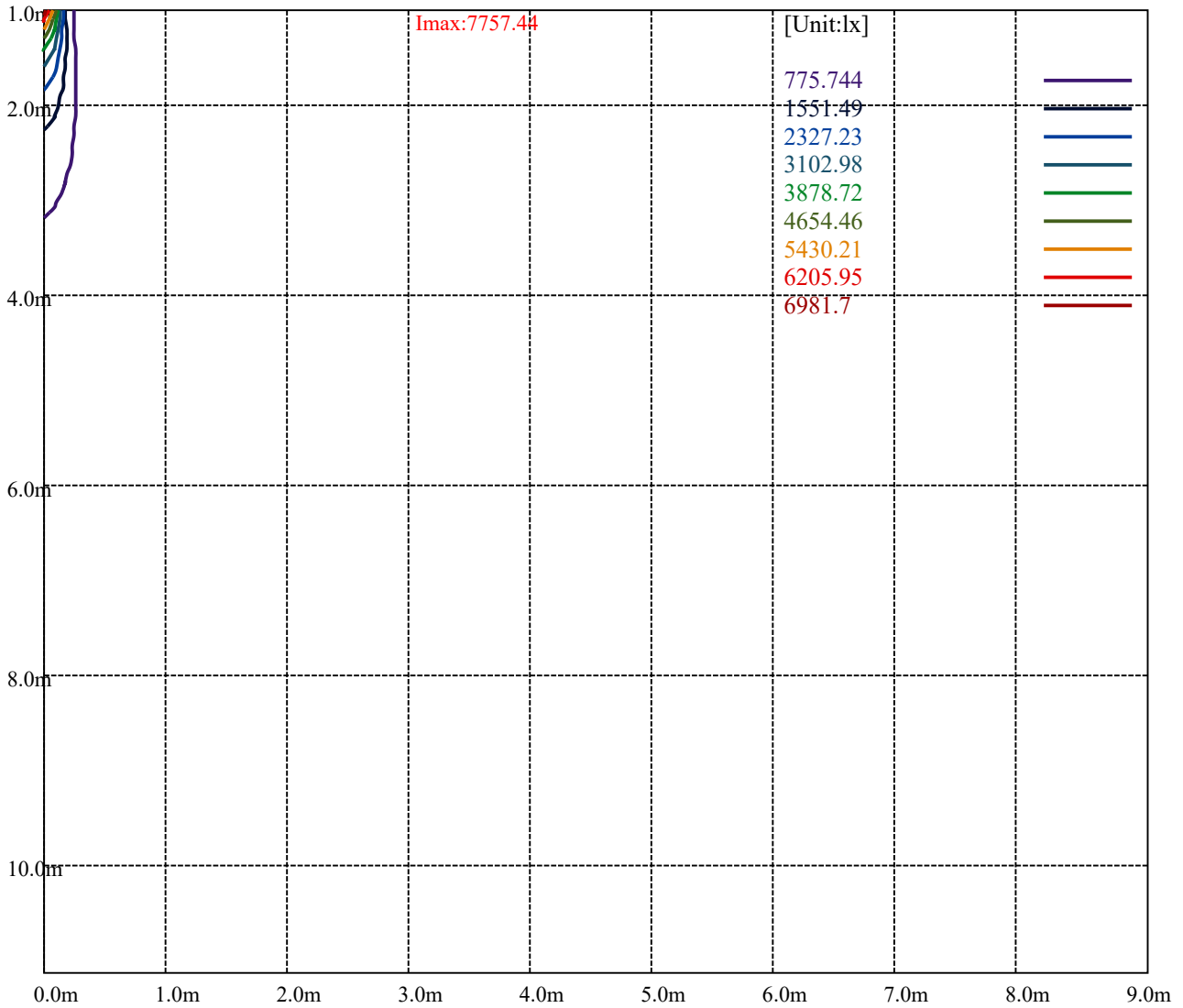
Road

Imax:7757.44

(10%Imax) 775.744	—
(20%Imax) 1551.49	—
(30%Imax) 2327.23	—
(40%Imax) 3102.98	—
(50%Imax) 3878.72	—
(60%Imax) 4654.46	—
(70%Imax) 5430.21	—
(80%Imax) 6205.95	—
(90%Imax) 6981.7	—



(10%Emax) 86.19333	—
(20%Emax) 172.3867	—
(30%Emax) 258.58	—
(40%Emax) 344.7733	—
(50%Emax) 430.9667	—
(60%Emax) 517.16	—
(70%Emax) 603.3533	—
(80%Emax) 689.5466	—
(90%Emax) 775.74	—



Luminance Table

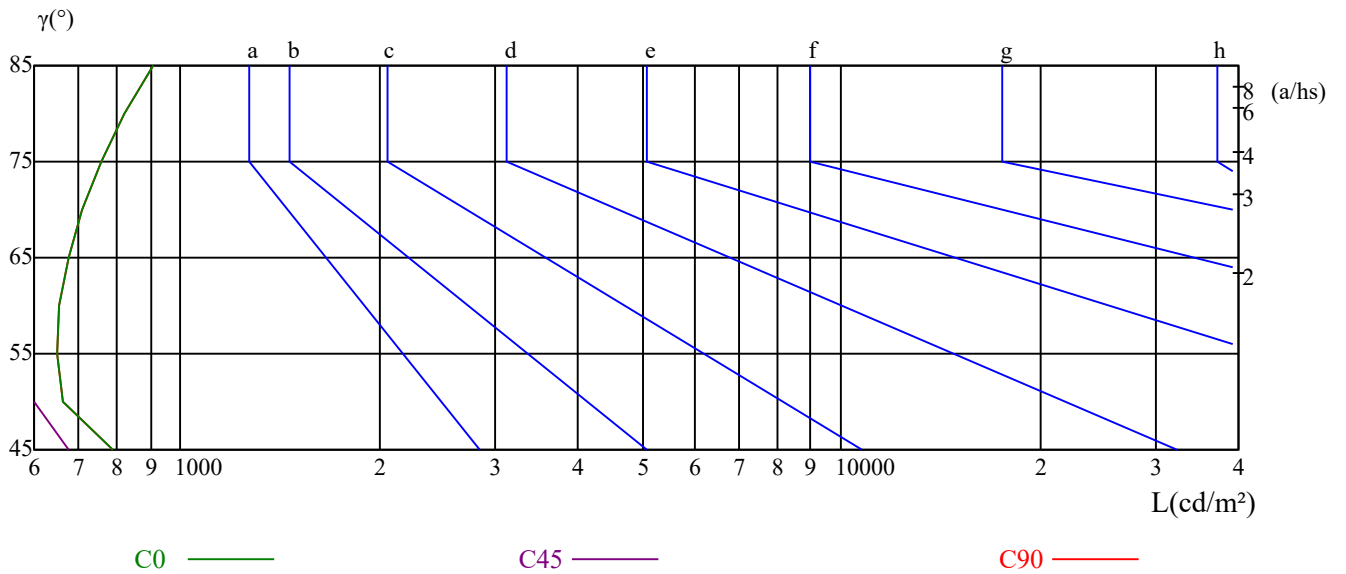
γ	45	50	55	60	65	70	75	80	85
C0	789	664	649	655	676	711	760	825	911
C45	679	562	541	537	545	562	588	622	668
C90	789	664	649	655	676	711	760	825	911

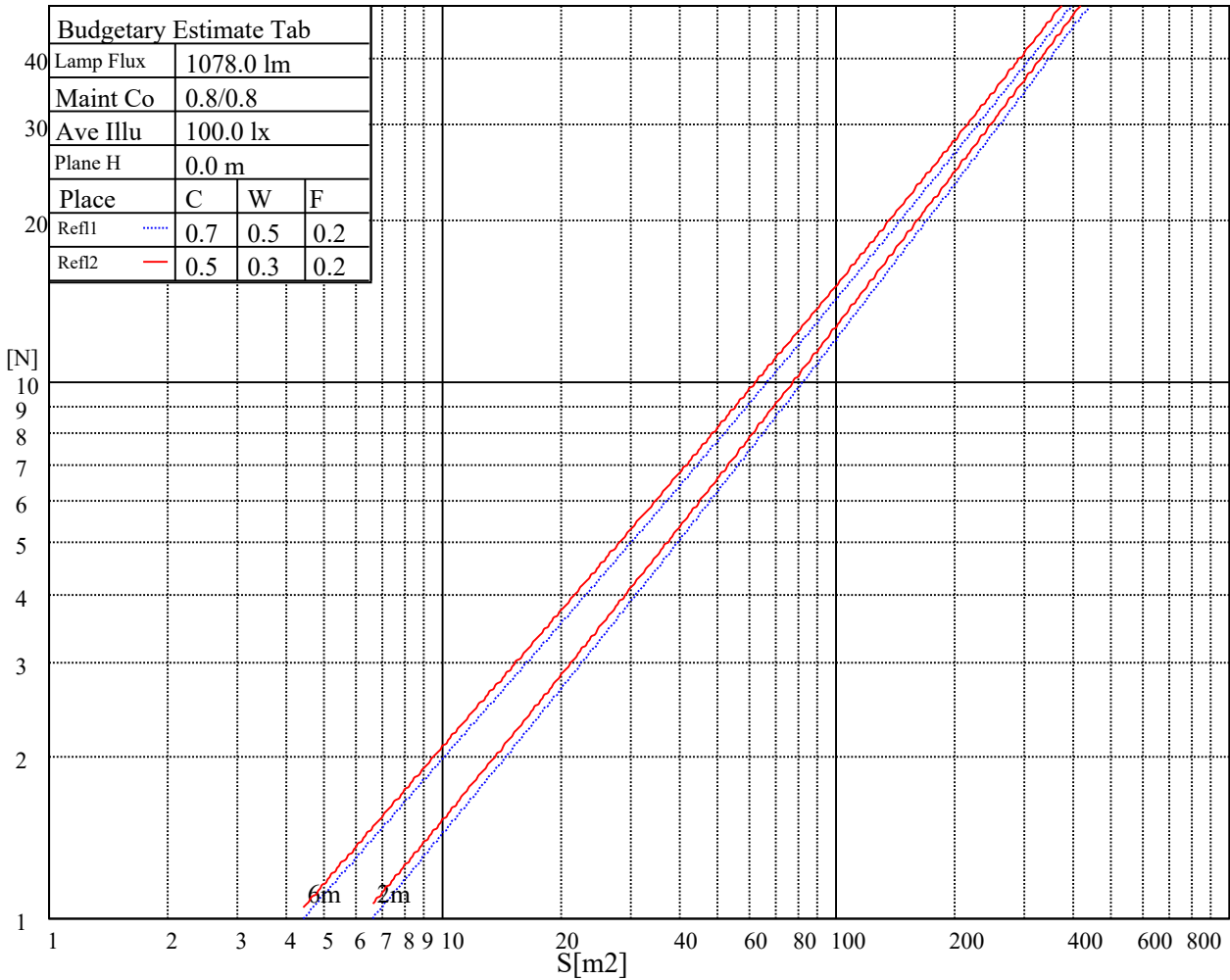
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
1613	1613	1613	2590	2590	2590	7637	7637	7637

Glare Table

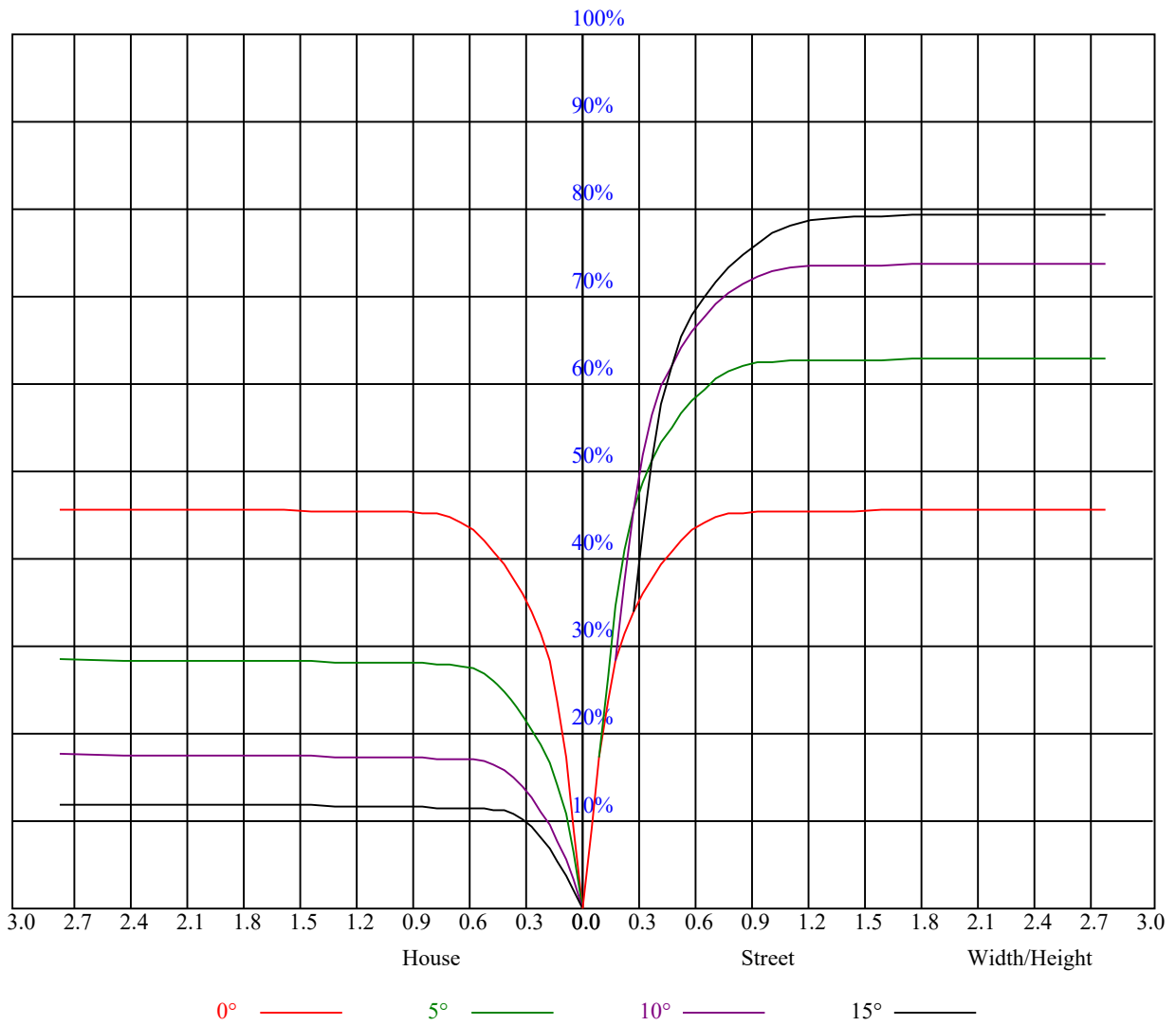
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.10	1.10	1.10	1.08	1.08	1.08	1.03	1.03	1.03	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.04	1.02	1.00	1.02	1.00	0.99	0.98	0.97	0.96	0.95	0.94	0.93	0.92	0.91	0.90	0.89
2	0.99	0.96	0.93	0.97	0.94	0.92	0.94	0.92	0.90	0.92	0.90	0.88	0.89	0.88	0.86	0.85
3	0.94	0.91	0.88	0.93	0.90	0.87	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.85	0.83	0.82
4	0.90	0.86	0.83	0.89	0.85	0.83	0.87	0.84	0.82	0.85	0.83	0.81	0.84	0.82	0.80	0.79
5	0.86	0.82	0.79	0.86	0.82	0.79	0.84	0.81	0.78	0.83	0.80	0.78	0.81	0.79	0.77	0.76
6	0.83	0.79	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.75	0.79	0.76	0.74	0.73
7	0.80	0.76	0.73	0.80	0.76	0.73	0.79	0.75	0.73	0.78	0.75	0.72	0.77	0.74	0.72	0.71
8	0.78	0.74	0.71	0.77	0.73	0.71	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.69
9	0.75	0.71	0.69	0.75	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.67
10	0.73	0.69	0.67	0.73	0.69	0.66	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.65



Intensity data(cd)

C/γ(°)	0.0	2.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0
0.0	7743.36	6646.48	4879.62	3006.04	1588.99	910.70	644.49	508.42	447.05
45.0	7838.22	7355.00	5949.82	4019.91	2288.62	1500.05	771.37	575.42	483.22
90.0	7823.40	7304.61	5882.23	3935.42	2207.98	1213.68	774.04	571.38	484.94
135.0	7624.78	7642.56	6462.68	4603.92	2762.94	1532.66	903.00	628.78	501.90
180.0	7743.36	7571.42	5836.57	4420.41	2574.10	1421.20	852.30	588.70	491.46
225.0	7838.22	6969.62	5329.93	3331.84	1834.45	1044.70	686.29	525.91	453.37
270.0	7823.40	6975.54	5333.19	3418.11	1965.49	1032.55	687.48	524.13	451.20
315.0	7624.78	5830.94	4678.03	2818.97	1460.63	874.83	590.15	497.51	442.96
360.0	7743.36	6646.48	4879.62	3006.04	1588.99	910.70	644.49	508.42	447.05
C/γ(°)	22.5	25.0	27.5	30.0	32.5	35.0	37.5	40.0	42.5
0.0	416.22	393.99	370.86	349.22	284.30	174.61	69.19	13.19	8.09
45.0	436.38	410.59	388.35	363.75	330.84	230.94	150.01	29.50	10.08
90.0	440.68	416.58	397.54	371.87	333.48	235.77	123.56	31.31	9.61
135.0	447.05	418.30	401.99	381.83	357.52	275.70	166.90	61.37	11.41
180.0	437.62	410.53	391.91	369.62	345.34	260.35	146.92	52.77	10.61
225.0	417.97	396.60	376.97	357.94	306.36	189.37	91.22	16.96	8.03
270.0	418.00	395.17	375.01	357.52	307.72	200.40	94.54	17.25	8.57
315.0	412.13	392.00	371.28	348.60	272.41	163.38	59.88	12.30	7.00
360.0	416.22	393.99	370.86	349.22	284.30	174.61	69.19	13.19	8.09
C/γ(°)	45.0	47.5	50.0	52.5	55.0	57.5	60.0	62.5	65.0
0.0	5.87	4.74	4.60	4.48	4.42	4.36	4.27	4.24	4.21
45.0	5.84	5.04	4.83	4.68	4.54	4.48	4.39	4.36	4.30
90.0	5.40	4.95	4.74	4.63	4.51	4.42	4.36	4.30	4.27
135.0	6.61	4.98	4.77	4.60	4.48	4.42	4.36	4.33	4.30
180.0	6.17	4.95	4.71	4.57	4.48	4.39	4.30	4.27	4.24
225.0	5.37	4.92	4.71	4.60	4.48	4.39	4.33	4.30	4.24
270.0	5.46	4.92	4.74	4.57	4.48	4.42	4.36	4.30	4.27
315.0	5.16	4.71	4.57	4.45	4.36	4.33	4.27	4.21	4.21
360.0	5.87	4.74	4.60	4.48	4.42	4.36	4.27	4.24	4.21
C/γ(°)	67.5	70.0	72.5	75.0	77.5	80.0	82.5	85.0	87.5
0.0	4.18	4.18	4.15	4.15	4.15	4.15	4.12	4.12	4.12
45.0	4.27	4.24	4.21	4.21	4.21	4.18	4.15	4.18	4.15
90.0	4.24	4.21	4.21	4.21	4.21	4.18	4.18	4.18	4.15
135.0	4.24	4.24	4.21	4.18	4.18	4.18	4.18	4.15	4.15
180.0	4.21	4.21	4.18	4.18	4.15	4.15	4.15	4.15	4.15
225.0	4.24	4.21	4.18	4.21	4.18	4.18	4.15	4.15	4.15
270.0	4.21	4.21	4.21	4.18	4.18	4.18	4.18	4.15	4.15
315.0	4.18	4.18	4.18	4.15	4.12	4.12	4.15	4.15	4.12
360.0	4.18	4.18	4.15	4.15	4.15	4.15	4.12	4.12	4.12
C/γ(°)	90.0								
0.0	4.12								
45.0	4.15								
90.0	4.15								
135.0	4.15								
180.0	4.12								
225.0	4.15								
270.0	4.15								
315.0	4.15								
360.0	4.12								