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Nata

Client:

LumCAT: 1450-E

Luminaire: 92.70.046.00

Report No: nata-0100

Test No:

LampCAT: CITIZEN CLU026

Lamp flux(lm): 974.7

Number of Lamps: 1

Length(mm): 44

Phm Type: C

Voltage(V):

Current(A):

Power (W): 6.3720

PF:

Ballast type:

Width(mm): 44

Height(mm): 0

Photometric Results

Lumens(lm): 862.30, Efficiency(%): 88.47% , Luminous Efficacy(lm/W): 135.33

Central intensity(cd): 2332.809, Maximum intensity(cd): 2332.809

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=26.2

[C90/270]Total=26.2

Field angle(10%Imax): [C0/180]Total=71.2

[C90/270]Total=71.2

Maximum s/h(1/2): C0_180=0.44 C90_270=0.44

Maximum s/h(1/4): C0_180=0.49 C90_270=0.49

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.82%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 96.863%

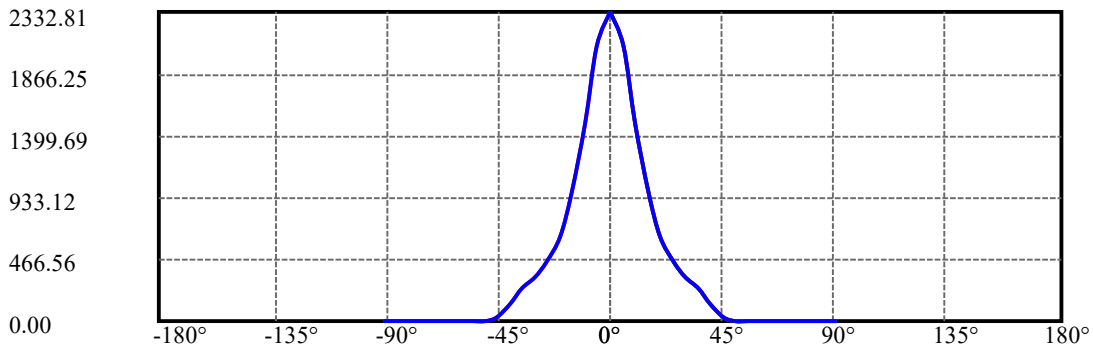
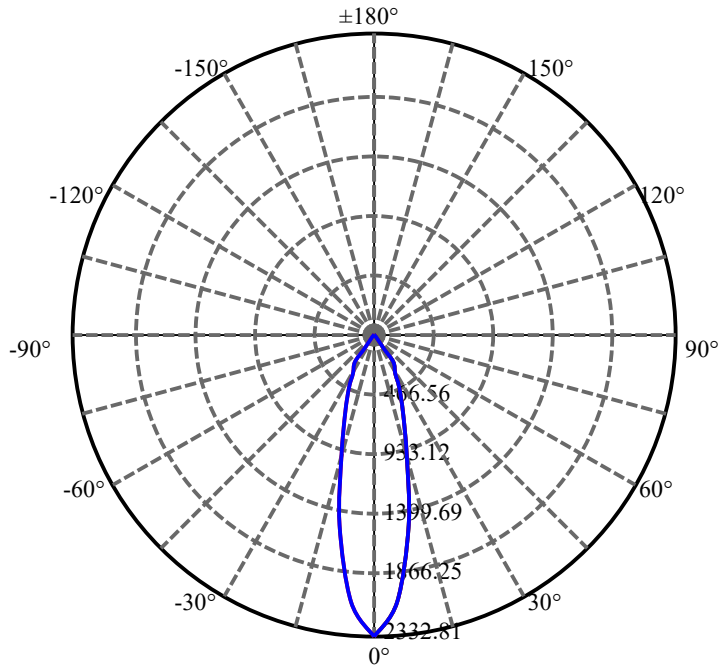
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2332.809	13.951	13.951	1.431%	1.618%
5.0	2068.510	98.820	112.77	10.138%	13.078%
10.0	1498.780	142.658	255.429	14.636%	29.622%
15.0	968.594	137.413	392.842	14.098%	45.557%
20.0	634.656	118.982	511.823	12.207%	59.356%
25.0	447.457	103.655	615.478	10.635%	71.376%
30.0	336.580	92.246	707.724	9.464%	82.074%
35.0	247.444	77.796	785.52	7.982%	91.096%
40.0	126.127	44.439	829.959	4.559%	96.249%
45.0	29.545	11.451	841.41	1.175%	97.577%
50.0	5.925	2.488	843.898	.255%	97.866%
55.0	4.446	1.996	845.895	.205%	98.097%
60.0	4.363	2.071	847.966	.212%	98.338%
65.0	4.356	2.164	850.13	.222%	98.589%
70.0	4.460	2.297	852.427	.236%	98.855%
75.0	5.430	2.875	855.302	.295%	99.188%
80.0	6.084	3.284	858.586	.337%	99.569%
85.0	5.113	2.792	861.378	.286%	99.893%
90.0	3.365	0.922	862.3	.095%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	707.72	72.61%	82.07%
0-40	829.96	85.15%	96.25%
0-60	847.97	87.00%	98.34%
0-90	861.38	88.37%	99.89%
0-120	861.38	88.37%	99.89%
0-180	862.30	88.47%	100.00%
60-90	15.48	1.59%	1.80%
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%
0-29.03	689.84	70.77%	80.00%

ZONAL LUMEN SUMMARY

0-10	255.43
10-20	256.39
20-30	195.90
30-40	122.24
40-50	13.94
50-60	4.07
60-70	4.46
70-80	6.16
80-90	2.79
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



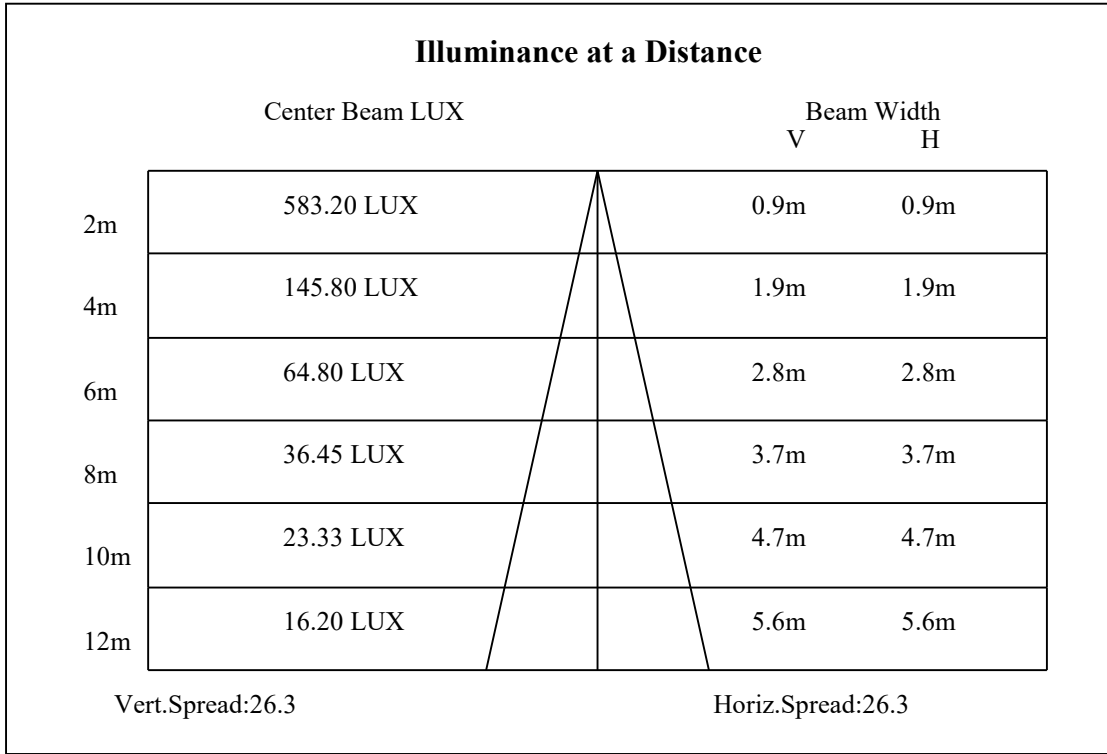
C0(Max): ———

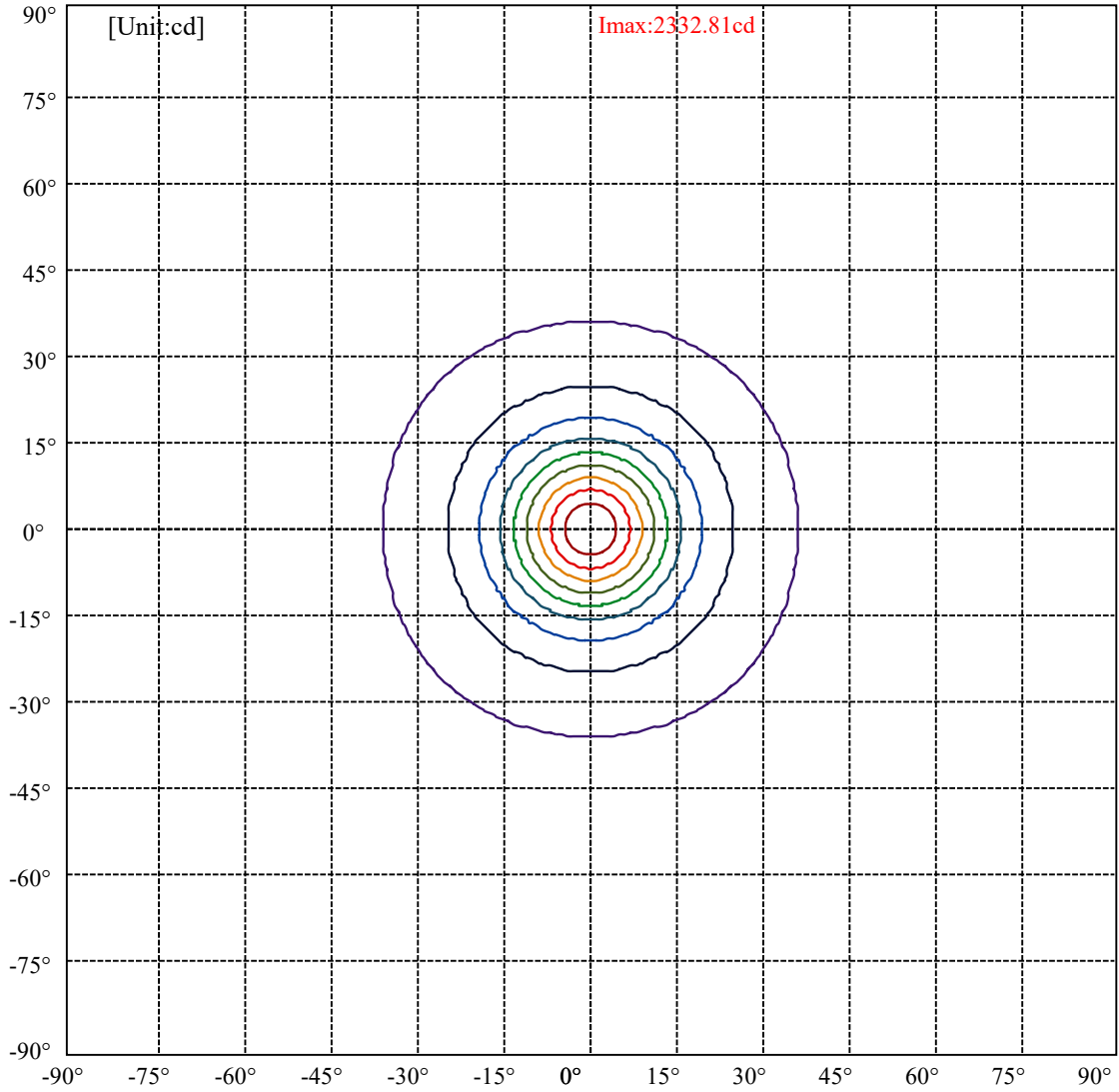
C0/C180: ———

C90/C270: ———

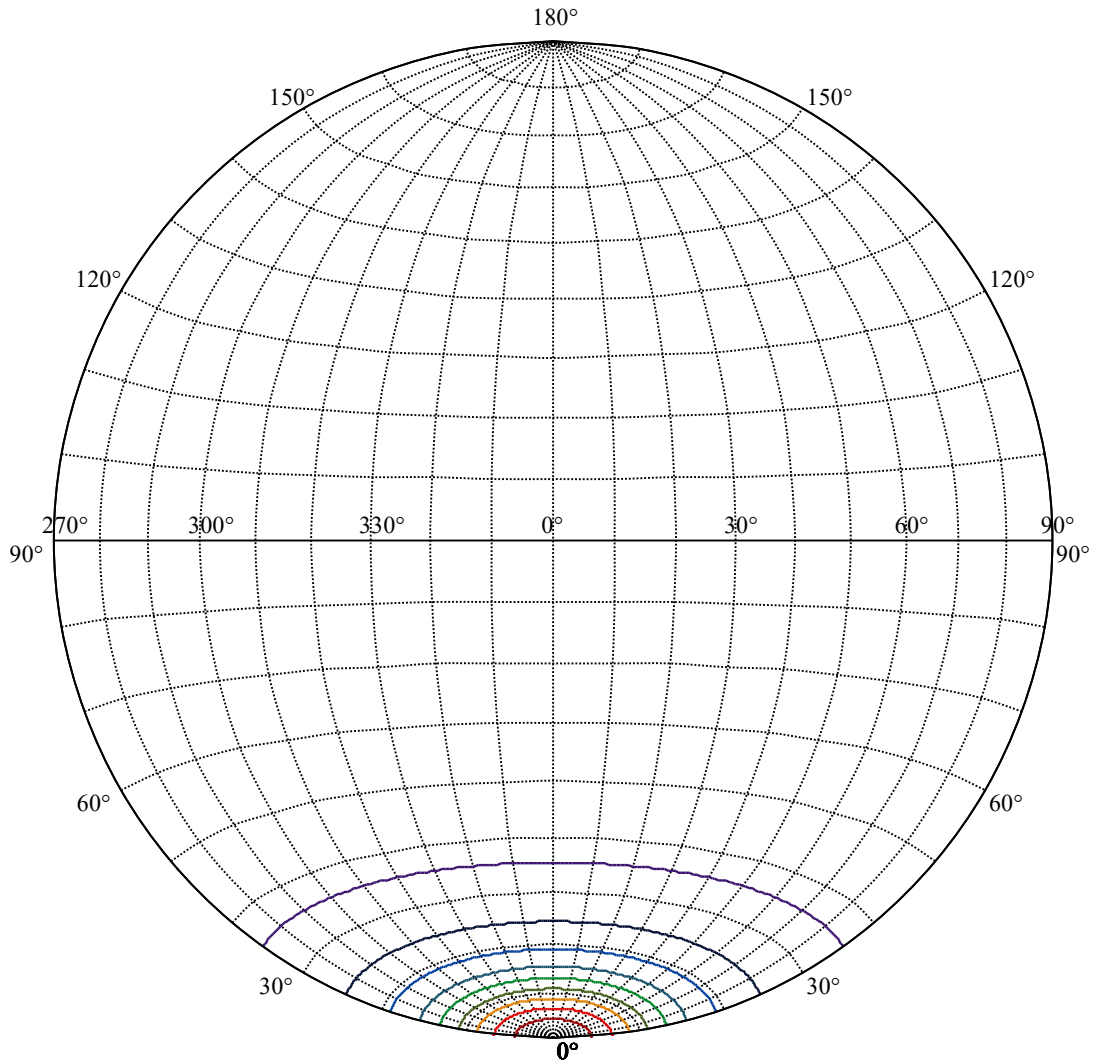
Field angle(10%Imax):C0/180Left:35.6 Right:35.6
:C90/270Left:35.6 Right:35.6

Beam Angle(50%Imax):C0/180Left:13.1 Right:13.1
:C90/270Left:13.1 Right:13.1





(10%Imax) 233.281	—
(20%Imax) 466.562	—
(30%Imax) 699.843	—
(40%Imax) 933.124	—
(50%Imax) 1166.4	—
(60%Imax) 1399.69	—
(70%Imax) 1632.97	—
(80%Imax) 1866.25	—
(90%Imax) 2099.53	—



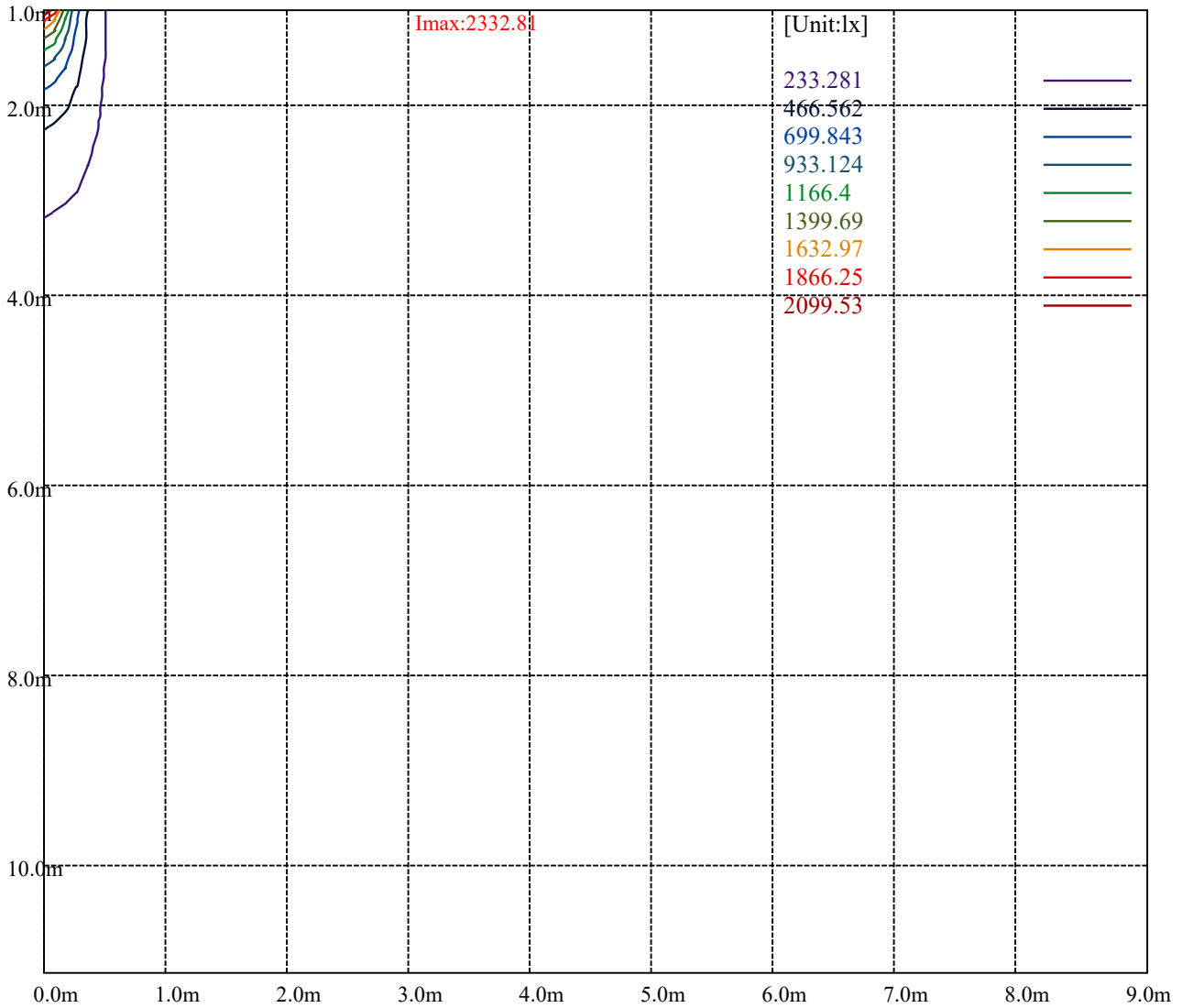
House

[Unit:cd]

Road

Imax:2332.81

(10%Imax) 233.281	—
(20%Imax) 466.562	—
(30%Imax) 699.843	—
(40%Imax) 933.124	—
(50%Imax) 1166.4	—
(60%Imax) 1399.69	—
(70%Imax) 1632.97	—
(80%Imax) 1866.25	—
(90%Imax) 2099.53	—



Luminance Table

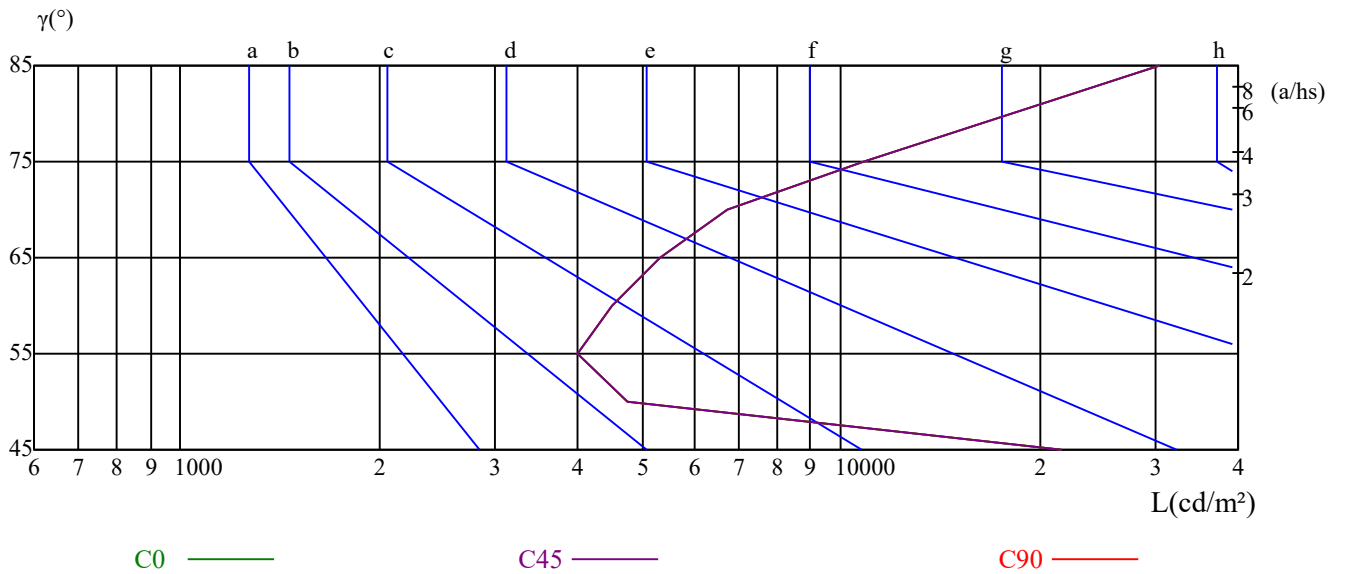
γ	45	50	55	60	65	70	75	80	85
C0	21582	4761	4004	4507	5324	6736	10837	18097	30302
C45	21582	4761	4004	4507	5324	6736	10837	18097	30302
C90	21582	4761	4004	4507	5324	6736	10837	18097	30302

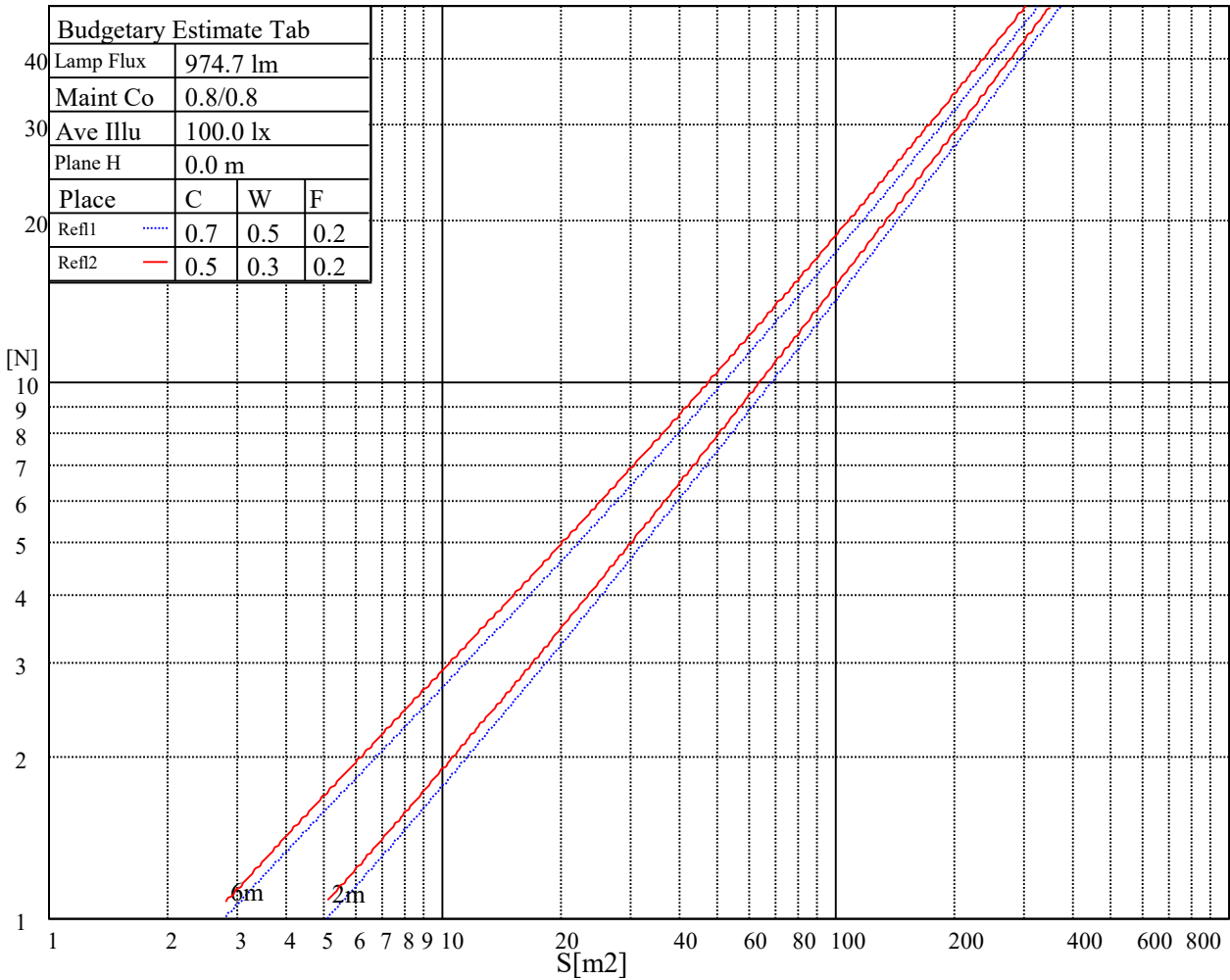
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5324	5324	5324	10837	10837	10837	30302	30302	30302

Glare Table

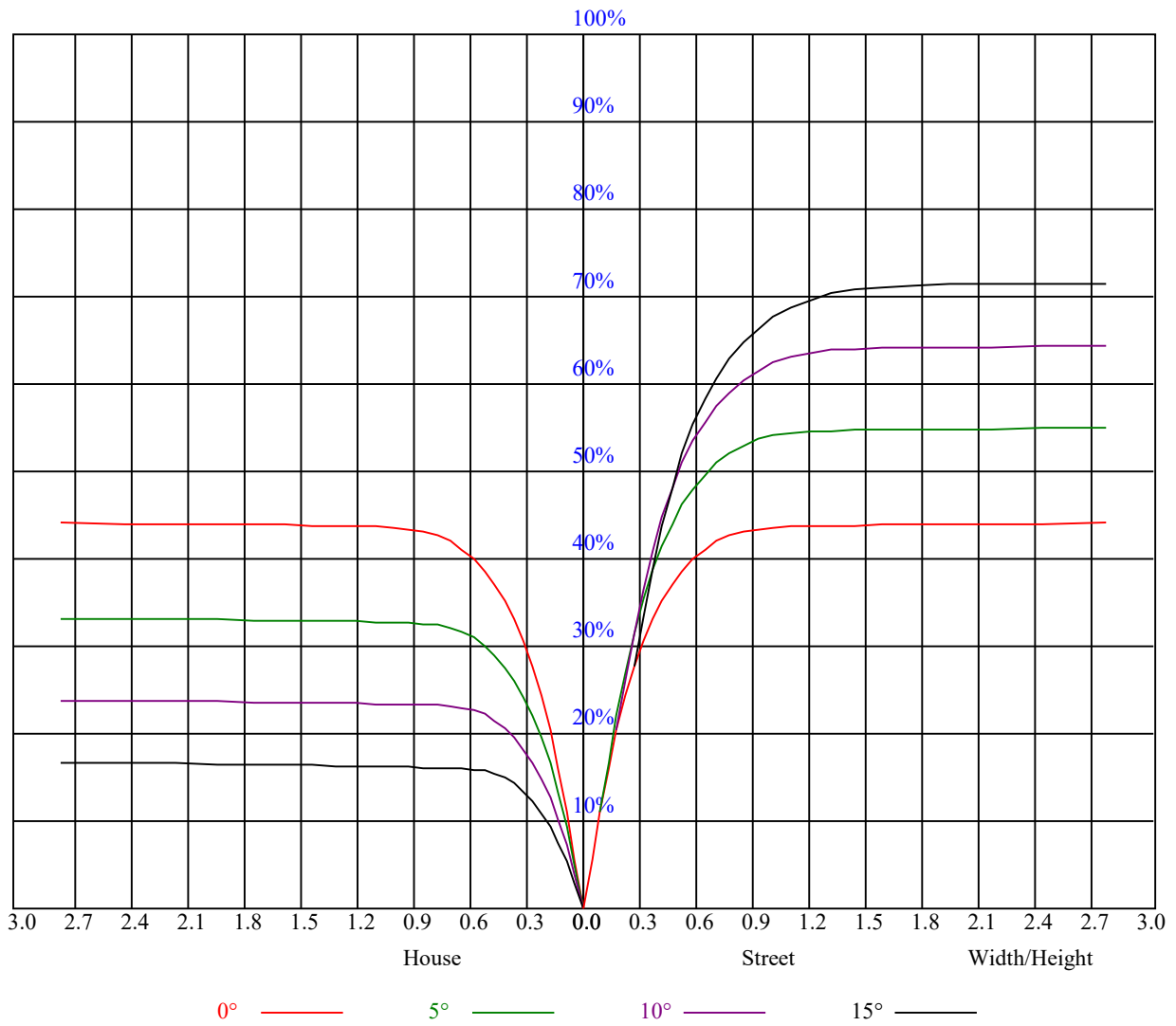
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

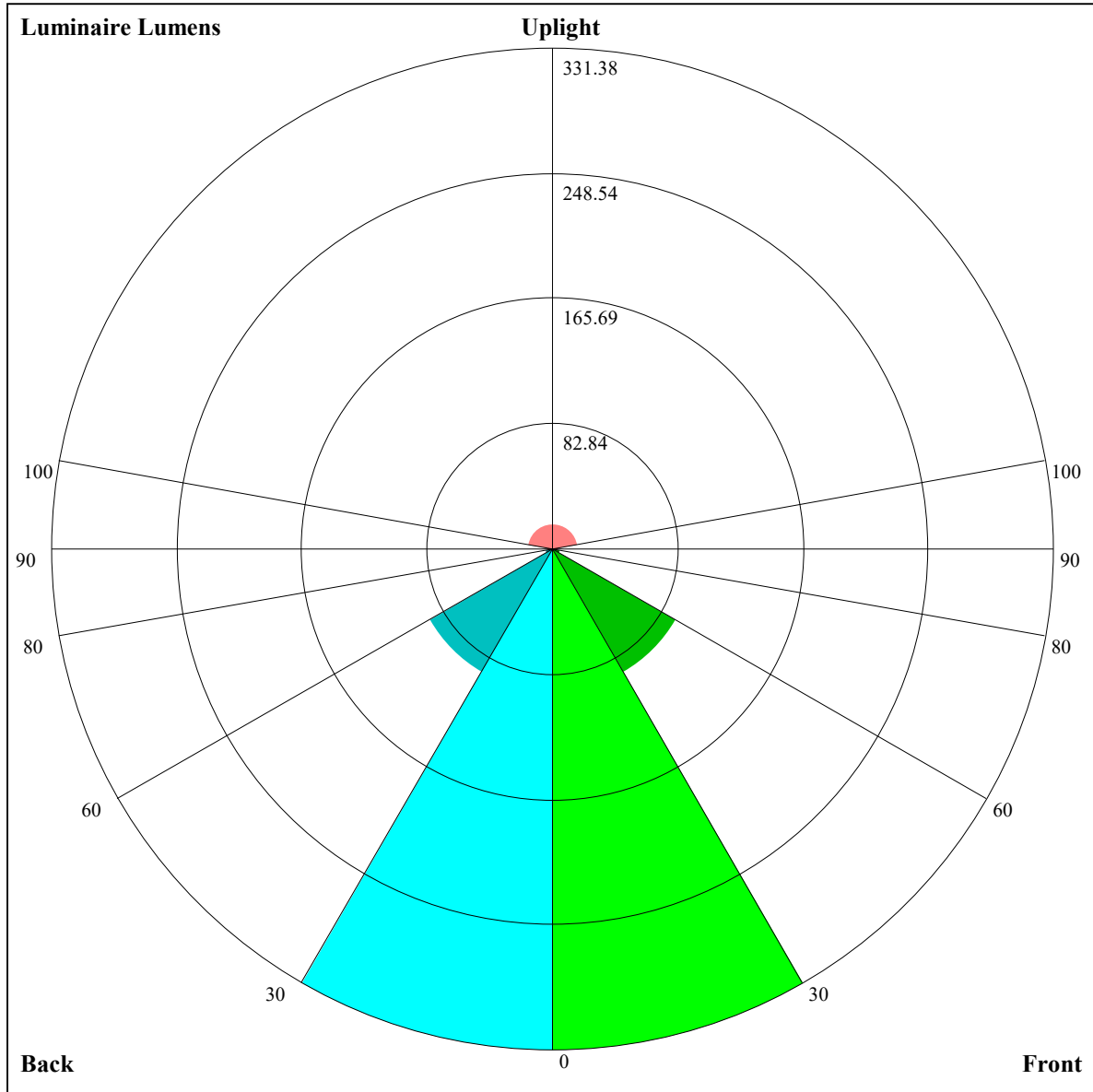
Luminance Limiting Curve





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	1.07	1.07	1.07	1.04	1.04	1.04	1.00	1.00	1.00	0.96	0.96	0.96	0.92	0.92	0.92	0.90
1	0.98	0.96	0.94	0.96	0.94	0.92	0.93	0.91	0.89	0.89	0.88	0.87	0.86	0.85	0.84	0.82
2	0.93	0.89	0.86	0.91	0.88	0.85	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.80	0.78
3	0.88	0.83	0.80	0.86	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.74
4	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.77	0.74	0.72	0.71
5	0.79	0.74	0.71	0.78	0.74	0.71	0.77	0.73	0.70	0.75	0.72	0.69	0.74	0.71	0.69	0.68
6	0.76	0.71	0.67	0.75	0.70	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.62
8	0.69	0.65	0.62	0.69	0.64	0.61	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.60
9	0.67	0.62	0.59	0.66	0.62	0.59	0.65	0.62	0.59	0.65	0.61	0.59	0.64	0.61	0.58	0.57
10	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.63	0.59	0.56	0.62	0.59	0.56	0.55





Luminaire Lumens:

FL=331.38,FM=93.72,FH=5.01,FVH=2.68

BL=331.38,BM=93.72,BH=5.01,BVH=2.68

UL=3.67,UH=17.47

BUG Rating:B1-U2-G0

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	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
22.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
45.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
67.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
90.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
112.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
135.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
157.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
180.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
202.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
225.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
247.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
270.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
292.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
315.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
337.5	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
360.0	2332.81	2068.51	1498.78	968.59	634.66	447.46	336.58	247.44	126.13	
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	
0.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
22.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
45.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
67.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
90.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
112.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
135.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
157.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
180.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
202.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
225.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
247.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
270.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
292.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
315.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
337.5	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
360.0	29.55	5.92	4.45	4.36	4.36	4.46	5.43	6.08	5.11	
C/γ(°)	90.0									
0.0	3.37									
22.5	3.37									
45.0	3.37									
67.5	3.37									
90.0	3.37									
112.5	3.37									
135.0	3.37									
157.5	3.37									
180.0	3.37									
202.5	3.37									
225.0	3.37									
247.5	3.37									
270.0	3.37									
292.5	3.37									
315.0	3.37									
337.5	3.37									
360.0	3.37									