
Nata

Client:

LumCAT: 1681-S

Luminaire: 92.70.124.00

Report No: GC2019031803

Test No:

LampCAT: SEAUL SAW10

Lamp flux(lm): 1631.6

Number of Lamps: 1

Length(mm): 47

Phm Type: C

Voltage(V):

Current(A):

Power (W): 12.2150

PF:

Ballast type:

Width(mm): 47

Height(mm): 0

Photometric Results

Lumens(lm): 1461.07, Efficiency(%): 89.55% , Luminous Efficacy(lm/W): 119.61

Central intensity(cd): 1805.299, Maximum intensity(cd): 1805.299

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=58.0

[C90/270]Total=58.0

Field angle(10%Imax): [C0/180]Total=77.2

[C90/270]Total=77.2

Maximum s/h(1/2): C0_180=0.90 C90_270=0.90

Maximum s/h(1/4): C0_180=0.87 C90_270=0.87

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 89.55%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.719%

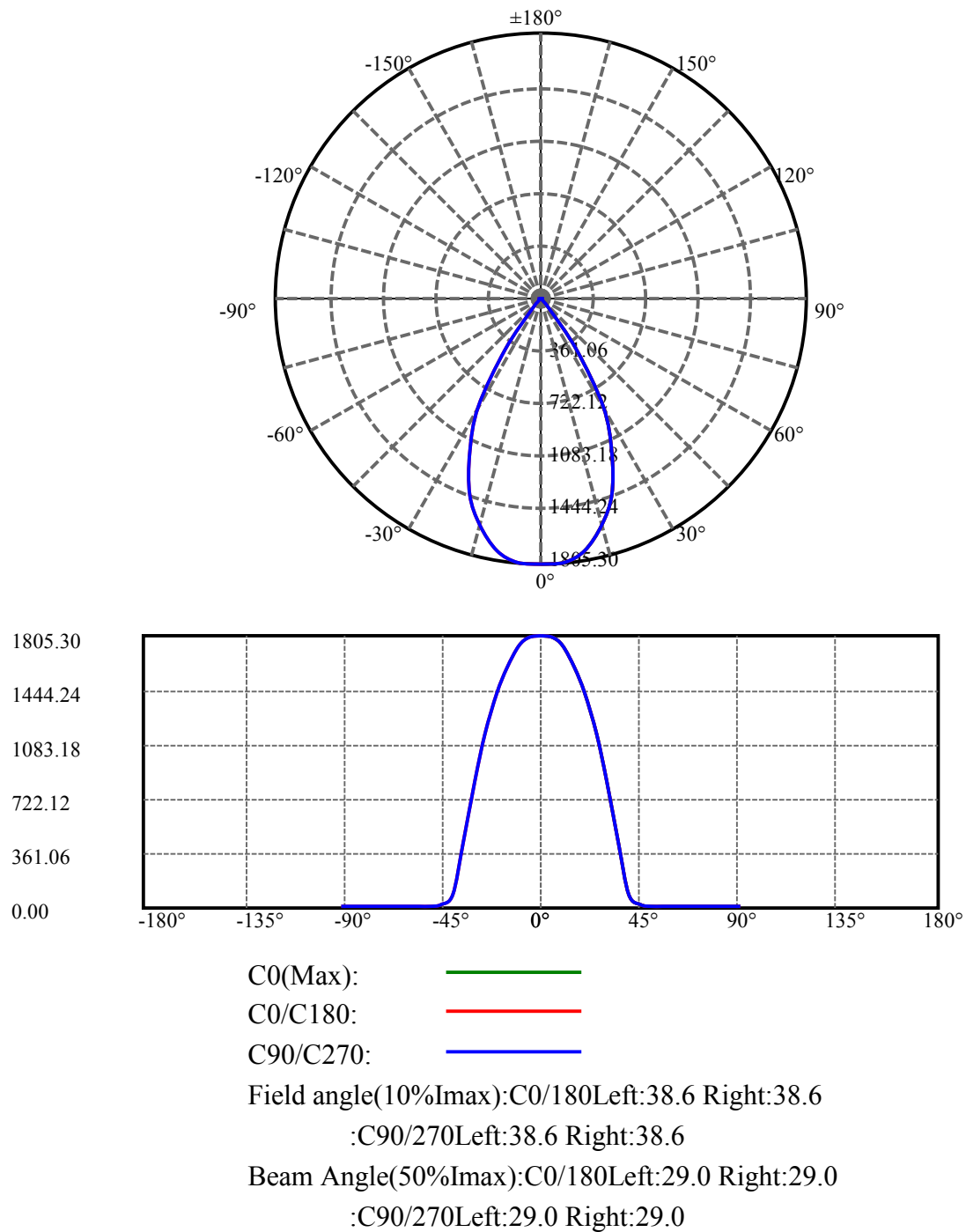
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1805.299	0.000	0	.000%	.000%
5.0	1796.490	43.058	43.058	2.639%	2.947%
10.0	1734.483	126.314	169.372	7.742%	11.592%
15.0	1593.126	197.392	366.764	12.098%	25.102%
20.0	1420.662	248.378	615.142	15.223%	42.102%
25.0	1152.337	269.860	885.002	16.540%	60.572%
30.0	843.808	252.614	1137.616	15.483%	77.862%
35.0	426.694	187.090	1324.707	11.467%	90.667%
40.0	89.157	86.066	1410.772	5.275%	96.558%
45.0	19.125	20.049	1430.822	1.229%	97.930%
50.0	8.121	5.505	1436.327	.337%	98.307%
55.0	6.359	3.148	1439.476	.193%	98.522%
60.0	6.111	2.882	1442.358	.177%	98.719%
65.0	5.981	2.940	1445.298	.180%	98.921%
70.0	5.953	3.022	1448.319	.185%	99.127%
75.0	5.932	3.107	1451.426	.190%	99.340%
80.0	5.939	3.176	1454.602	.195%	99.557%
85.0	5.946	3.229	1457.832	.198%	99.778%
90.0	5.877	3.237	1461.069	.198%	100.000%

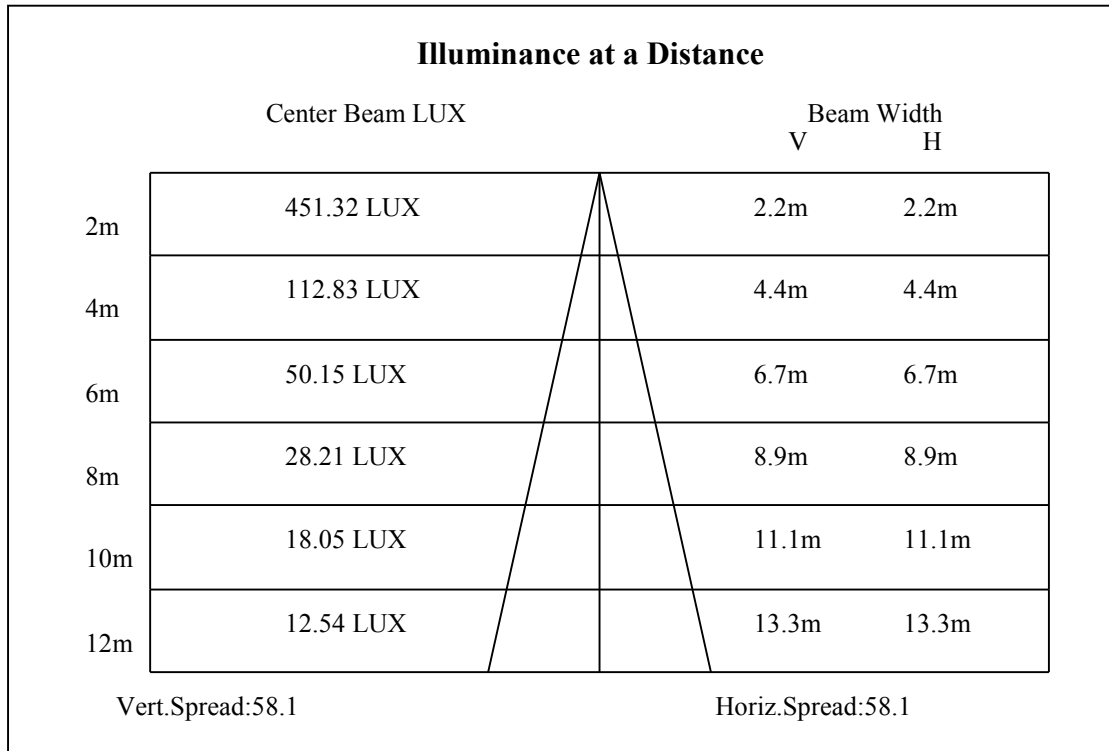
ZONAL LUMEN SUMMARY

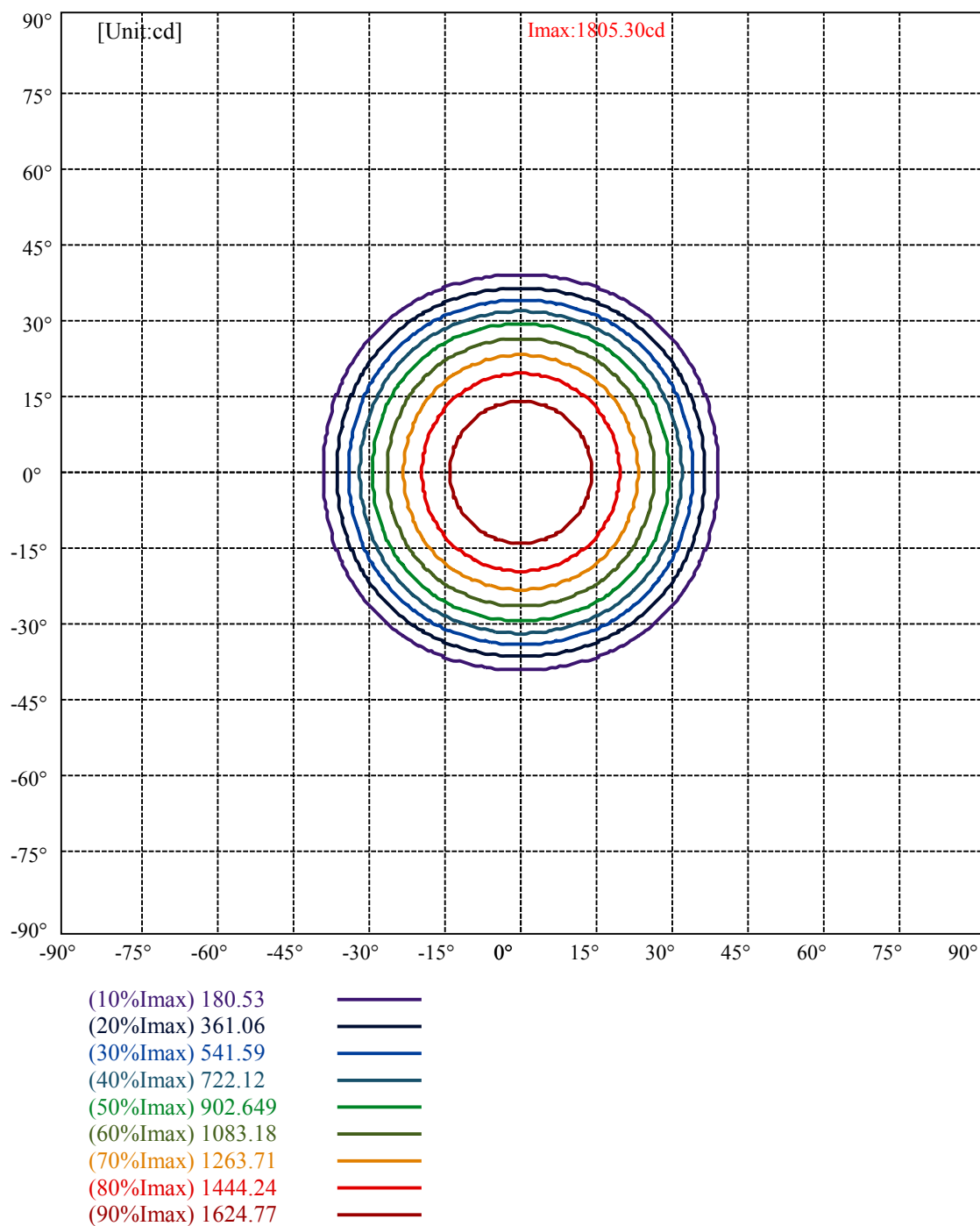
Zone	Lumens	%Lamp	%Fixt
0-30	1137.62	69.72%	77.86%
0-40	1410.77	86.47%	96.56%
0-60	1442.36	88.40%	98.72%
0-90	1457.83	89.35%	99.78%
0-120	1457.83	89.35%	99.78%
0-180	1461.07	89.55%	100.00%
60-90	18.36	1.13%	1.26%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-30.83	1168.86	71.64%	80.00%

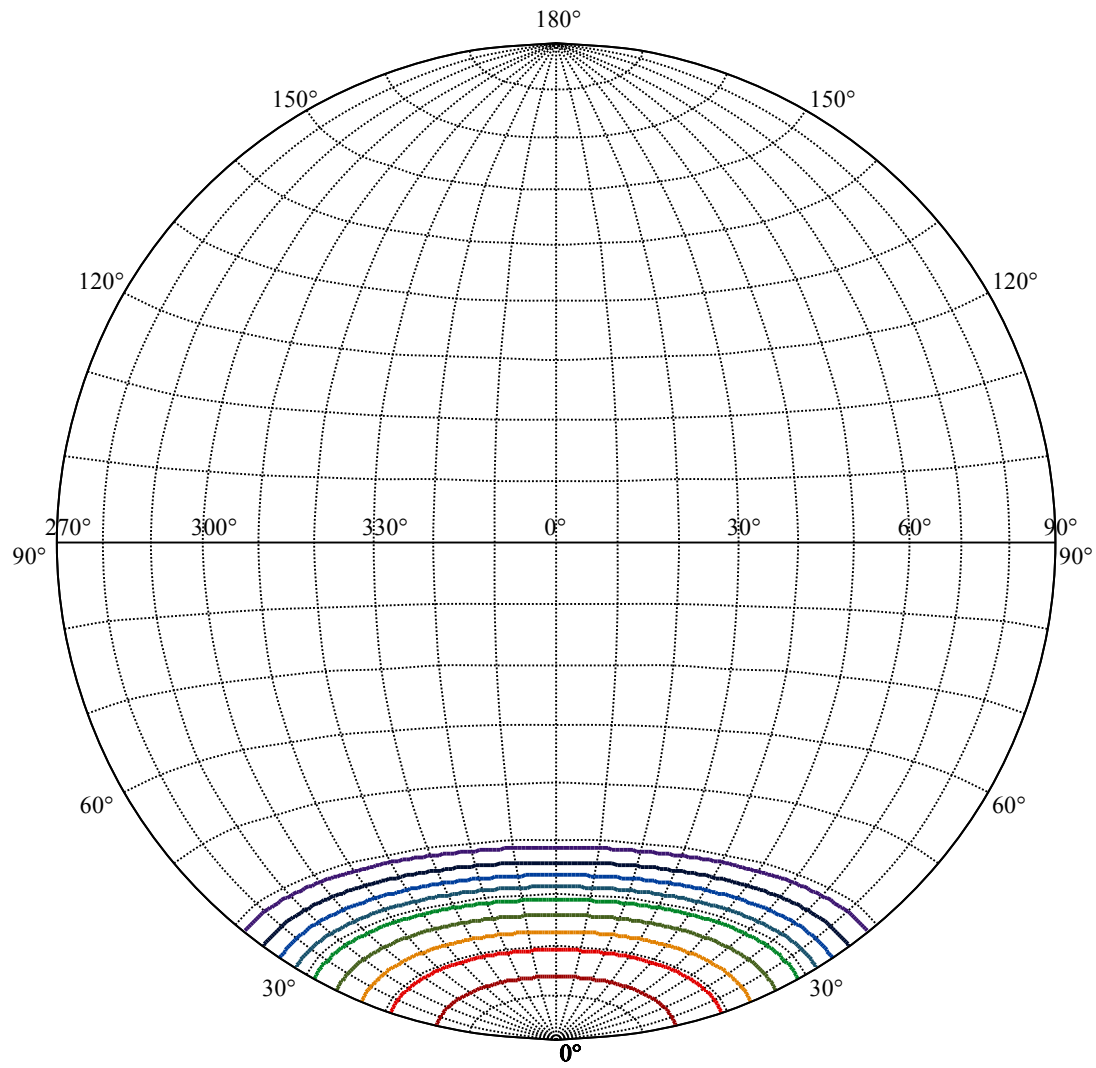
ZONAL LUMEN SUMMARY

0-10	169.37
10-20	445.77
20-30	522.47
30-40	273.16
40-50	25.55
50-60	6.03
60-70	5.96
70-80	6.28
80-90	3.23
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







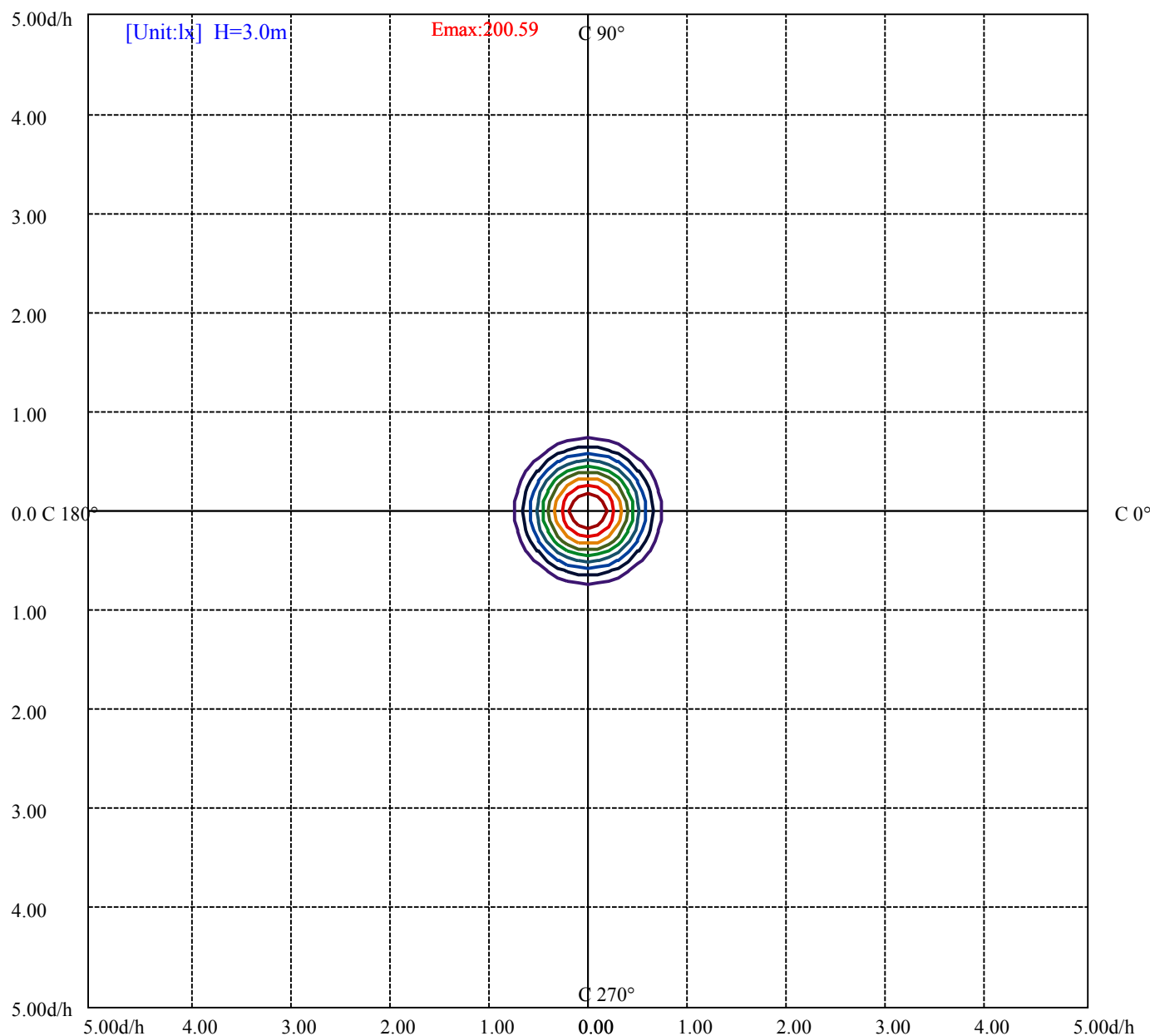


House

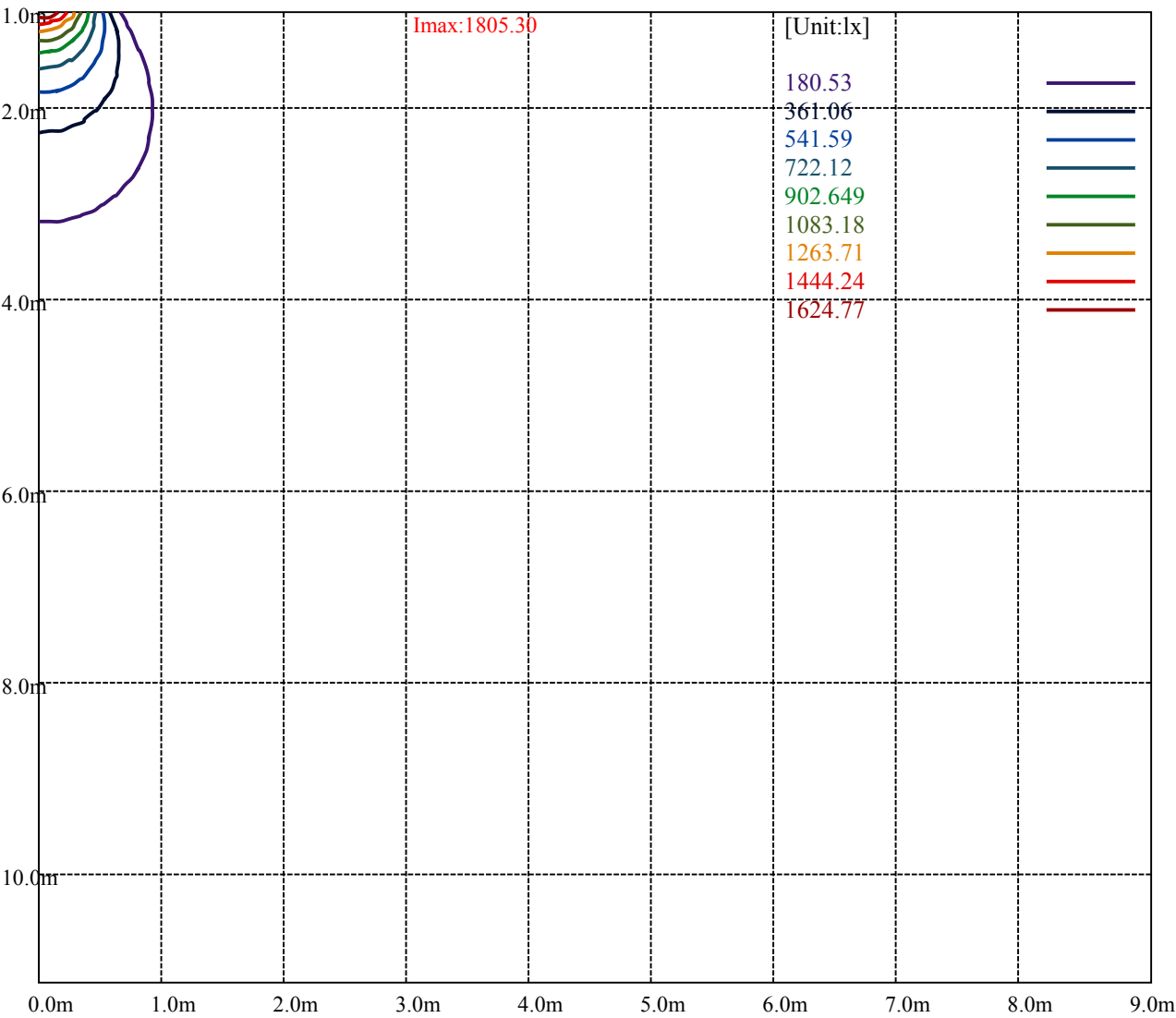
[Unit:cd]

Road

Imax:1805.30	
(10%Imax) 180.53	
(20%Imax) 361.06	
(30%Imax) 541.59	
(40%Imax) 722.12	
(50%Imax) 902.649	
(60%Imax) 1083.18	
(70%Imax) 1263.71	
(80%Imax) 1444.24	
(90%Imax) 1624.77	



(10%Emax) 20.05889	—
(20%Emax) 40.11778	—
(30%Emax) 60.17667	—
(40%Emax) 80.23556	—
(50%Emax) 100.2943	—
(60%Emax) 120.3533	—
(70%Emax) 140.4122	—
(80%Emax) 160.4711	—
(90%Emax) 180.53	—



Luminance Table

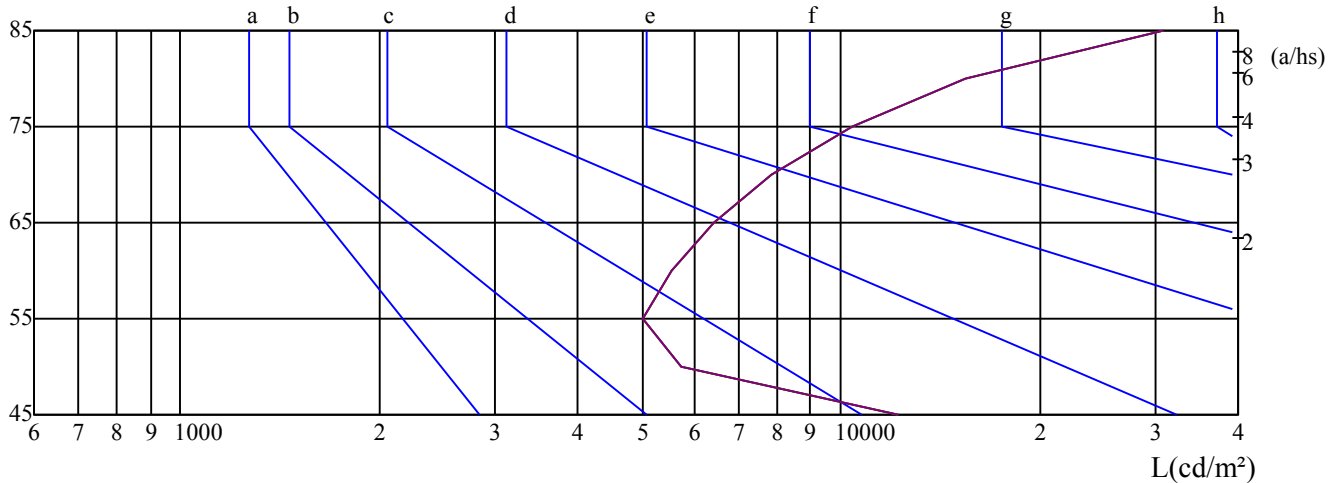
γ	45	50	55	60	65	70	75	80	85
C0	12244	5719	5019	5533	6407	7879	10376	15483	30884
C45	12244	5719	5019	5533	6407	7879	10376	15483	30884
C90	12244	5719	5019	5533	6407	7879	10376	15483	30884

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6407	6407	6407	10376	10376	10376	30884	30884	30884

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

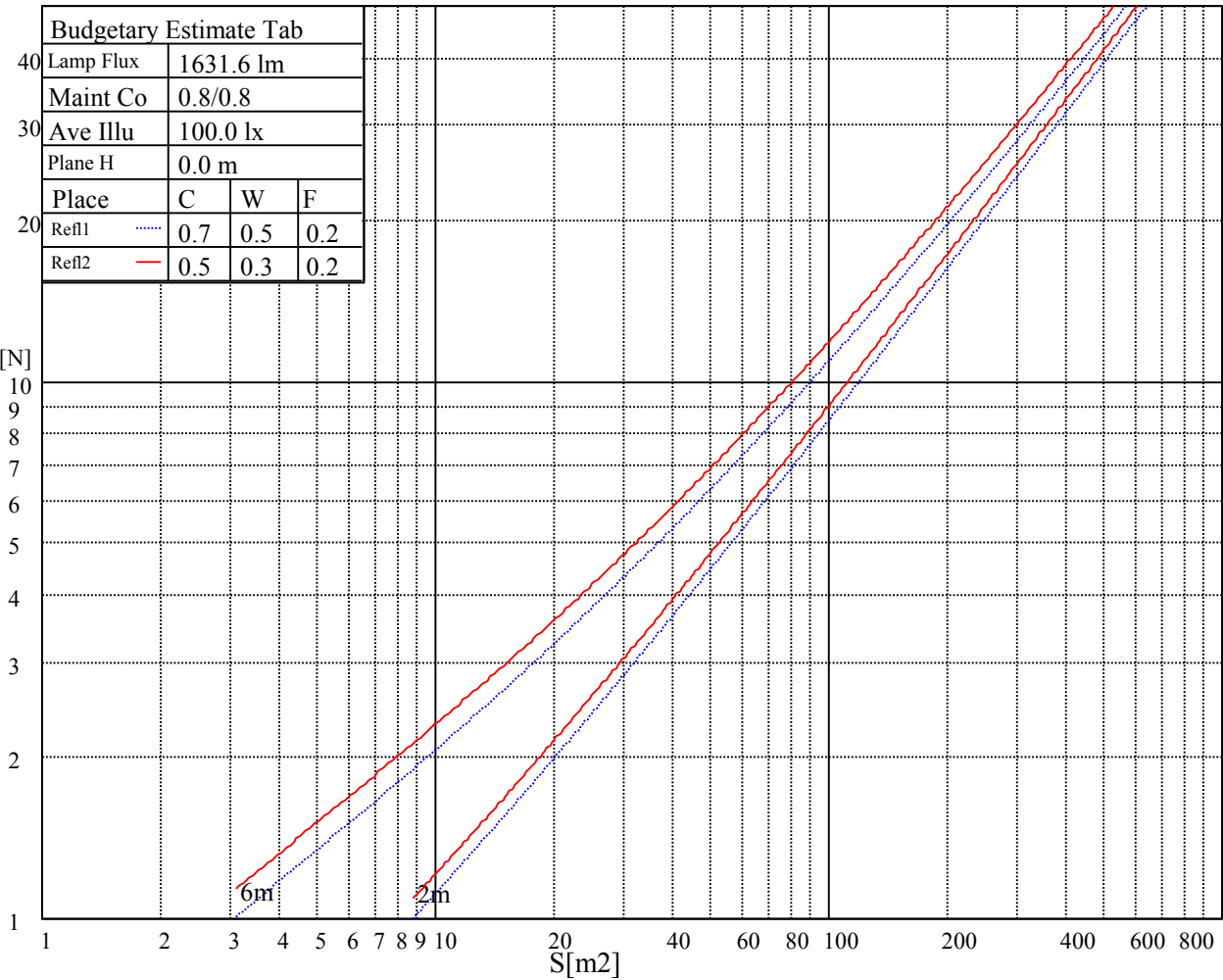
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

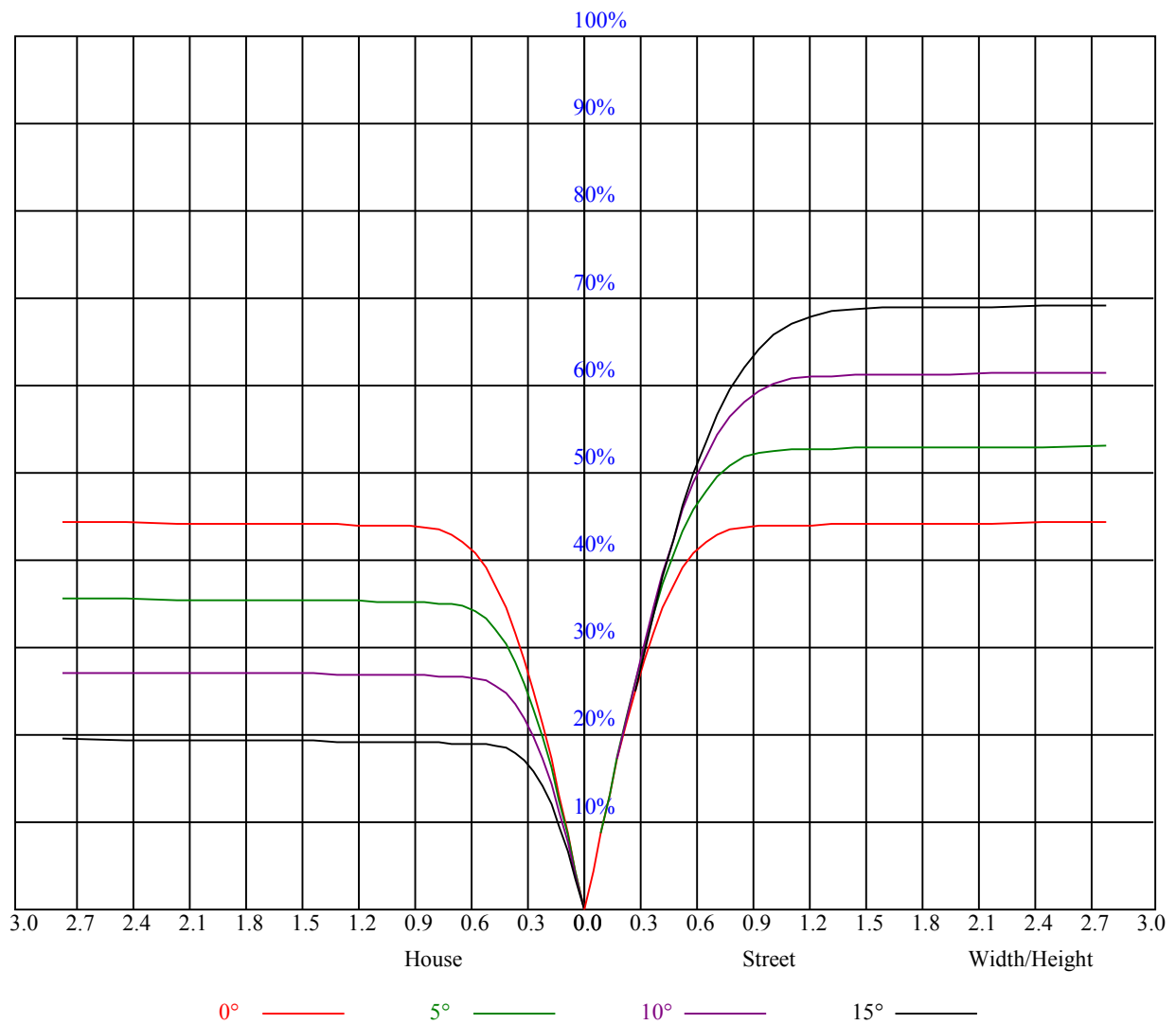
C0 ———

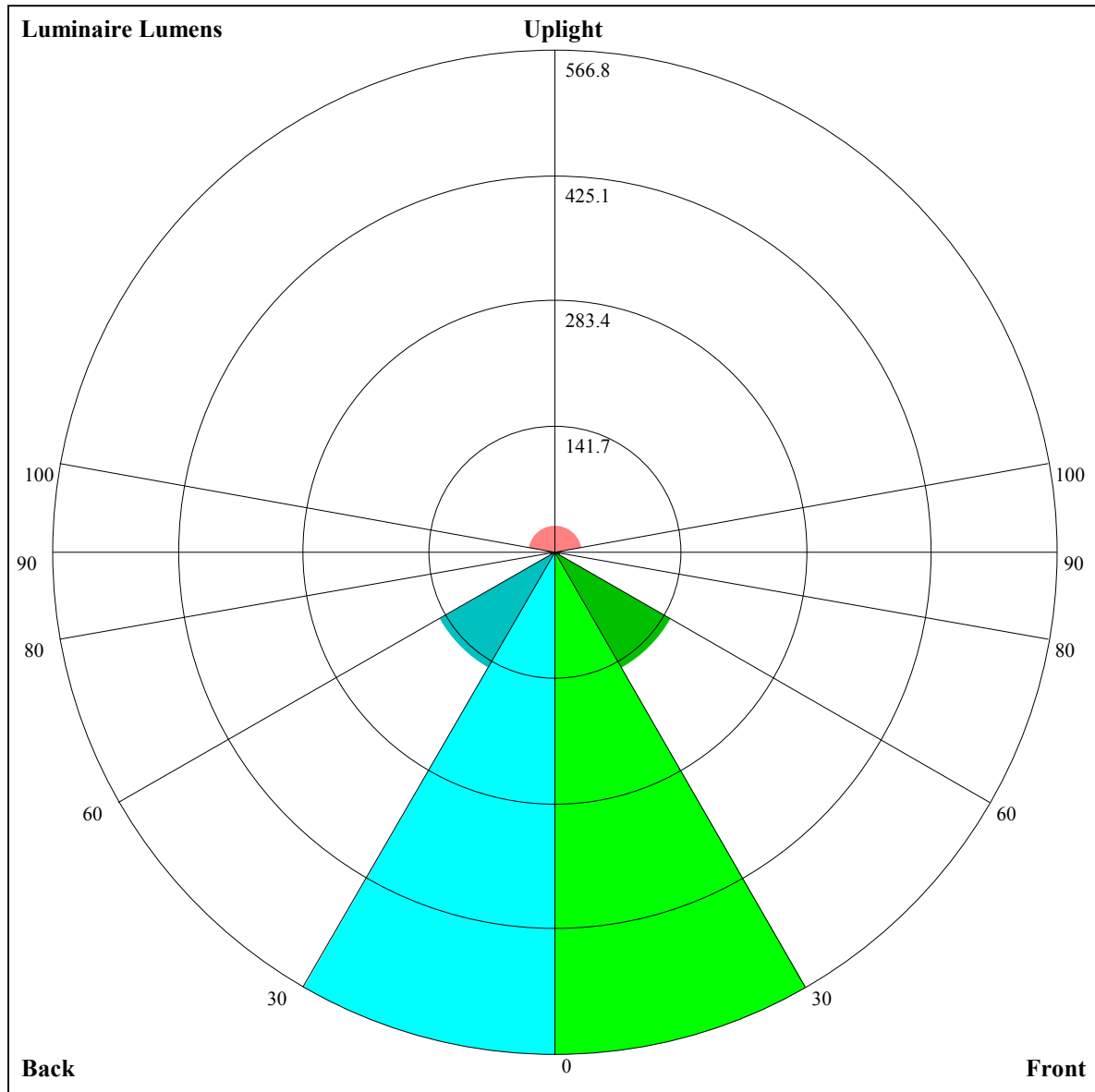
C45 ———

C90 ———



RHOC	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	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.90
1	0.99	0.97	0.95	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87	0.86	0.85	0.84
2	0.93	0.89	0.86	0.91	0.88	0.85	0.88	0.86	0.83	0.86	0.83	0.82	0.83	0.81	0.80	0.78
3	0.87	0.82	0.79	0.86	0.82	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.77	0.75	0.73
4	0.81	0.77	0.73	0.80	0.76	0.73	0.79	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.69
5	0.77	0.72	0.68	0.76	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.65
6	0.72	0.67	0.63	0.72	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.68	0.65	0.62	0.61
7	0.68	0.63	0.59	0.68	0.63	0.59	0.67	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.58	0.57
8	0.65	0.59	0.56	0.64	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.55	0.61	0.58	0.55	0.54
9	0.61	0.56	0.53	0.61	0.56	0.53	0.60	0.55	0.52	0.59	0.55	0.52	0.58	0.55	0.52	0.51
10	0.58	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.56	0.52	0.49	0.56	0.52	0.49	0.48





Luminaire Lumens:

FL=566.8,FM=150.85,FH=6.12,FVH=3.23

BL=566.8,BM=150.85,BH=6.12,BVH=3.23

UL=6.41,UH=30.51

BUG Rating:B2-U2-G0

Nata 1681-S

Intensity data(cd)										Appendix Page: 15 Total:15	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
45.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
90.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
135.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
180.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
225.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
270.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
315.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
360.0	1805.30	1796.49	1734.48	1593.13	1420.66	1152.34	843.81	426.69	89.16		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
45.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
90.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
135.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
180.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
225.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
270.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
315.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
360.0	19.13	8.12	6.36	6.11	5.98	5.95	5.93	5.94	5.95		
C/γ(°)	90.0										
0.0	5.88										
45.0	5.88										
90.0	5.88										
135.0	5.88										
180.0	5.88										
225.0	5.88										
270.0	5.88										
315.0	5.88										
360.0	5.88										