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Nata

Client: NT

LumCAT: 11-0161-S2

Luminaire: 69-0031

Report No: 20260803-B013

Ballast type: DC

Test No: 20260803-C013

Voltage(V): 22.140

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1126.0

Power (W): 10.051

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 980.72, Efficiency(%): 87.10% , Luminous Efficacy(lm/W): 97.57

Central intensity(cd): 578.853, Maximum intensity(cd): 683.130

Angle of maximum intensity: C=0.0 γ =25.0

Beam Angle(50%Imax): [C0/180]Total=77.6

[C90/270]Total=76.7

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

[C90/270]Total=94.1

Maximum s/h(1/2): C0_180=1.45 C90_270=1.34

Maximum s/h(1/4): C0_180=1.22 C90_270=1.15

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 86.98%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.880%

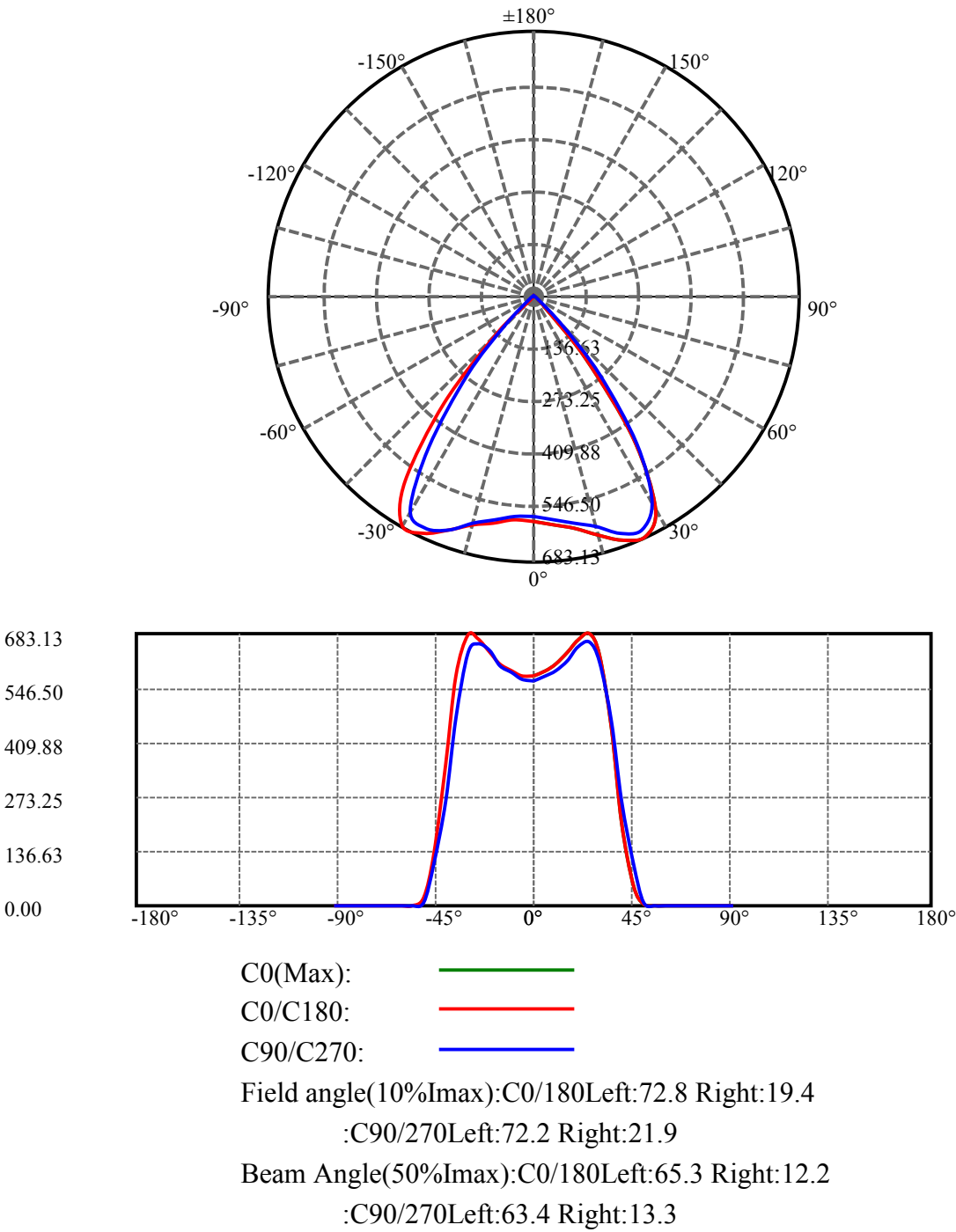
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	576.420	0.000	0	0.00%	0.00%
5.0	582.958	13.860	13.86	1.23%	1.41%
10.0	598.675	42.271	56.131	3.75%	5.72%
15.0	619.147	72.240	128.371	6.42%	13.09%
20.0	645.454	104.221	232.592	9.26%	23.72%
25.0	662.239	137.153	369.745	12.18%	37.70%
30.0	628.738	163.374	533.119	14.51%	54.36%
35.0	510.898	167.819	700.938	14.90%	71.47%
40.0	327.001	139.797	840.735	12.42%	85.73%
45.0	148.527	88.048	928.783	7.82%	94.70%
50.0	39.172	37.927	966.711	3.37%	98.57%
55.0	6.200	9.865	976.576	0.88%	99.58%
60.0	1.164	1.702	978.278	0.15%	99.75%
65.0	0.809	0.480	978.758	0.04%	99.80%
70.0	0.751	0.395	979.153	0.04%	99.84%
75.0	0.735	0.389	979.542	0.03%	99.88%
80.0	0.725	0.391	979.933	0.03%	99.92%
85.0	0.725	0.394	980.326	0.03%	99.96%
90.0	0.725	0.397	980.723	0.04%	100.00%

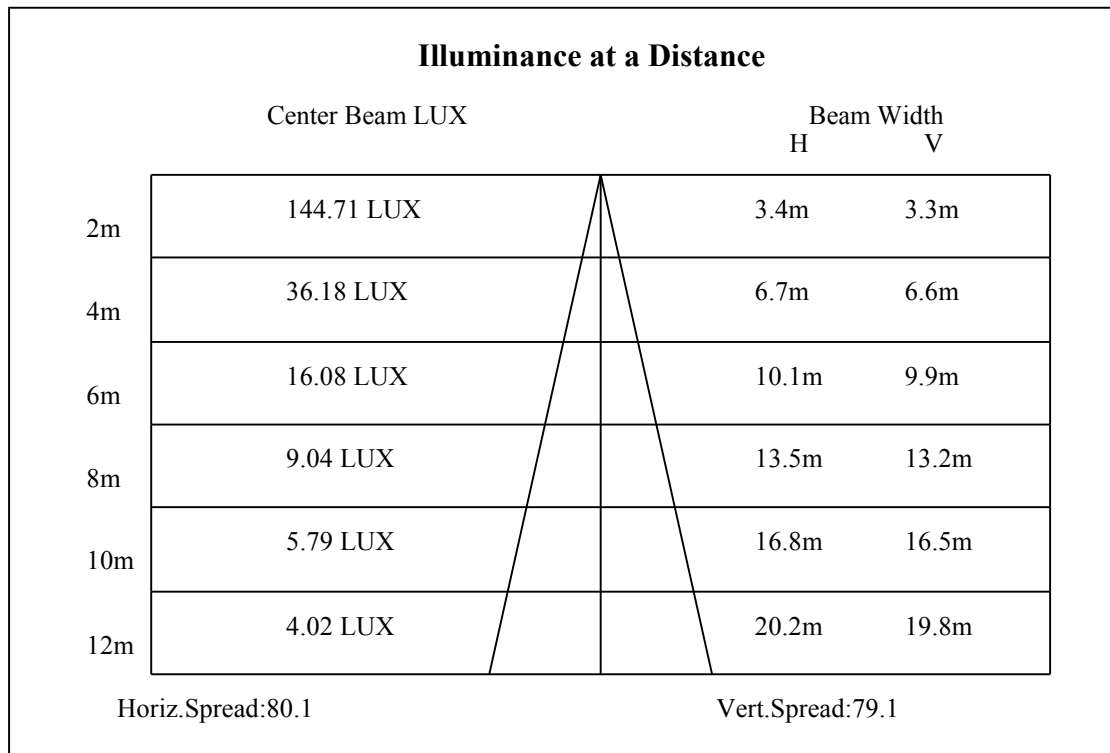
ZONAL LUMEN SUMMARY

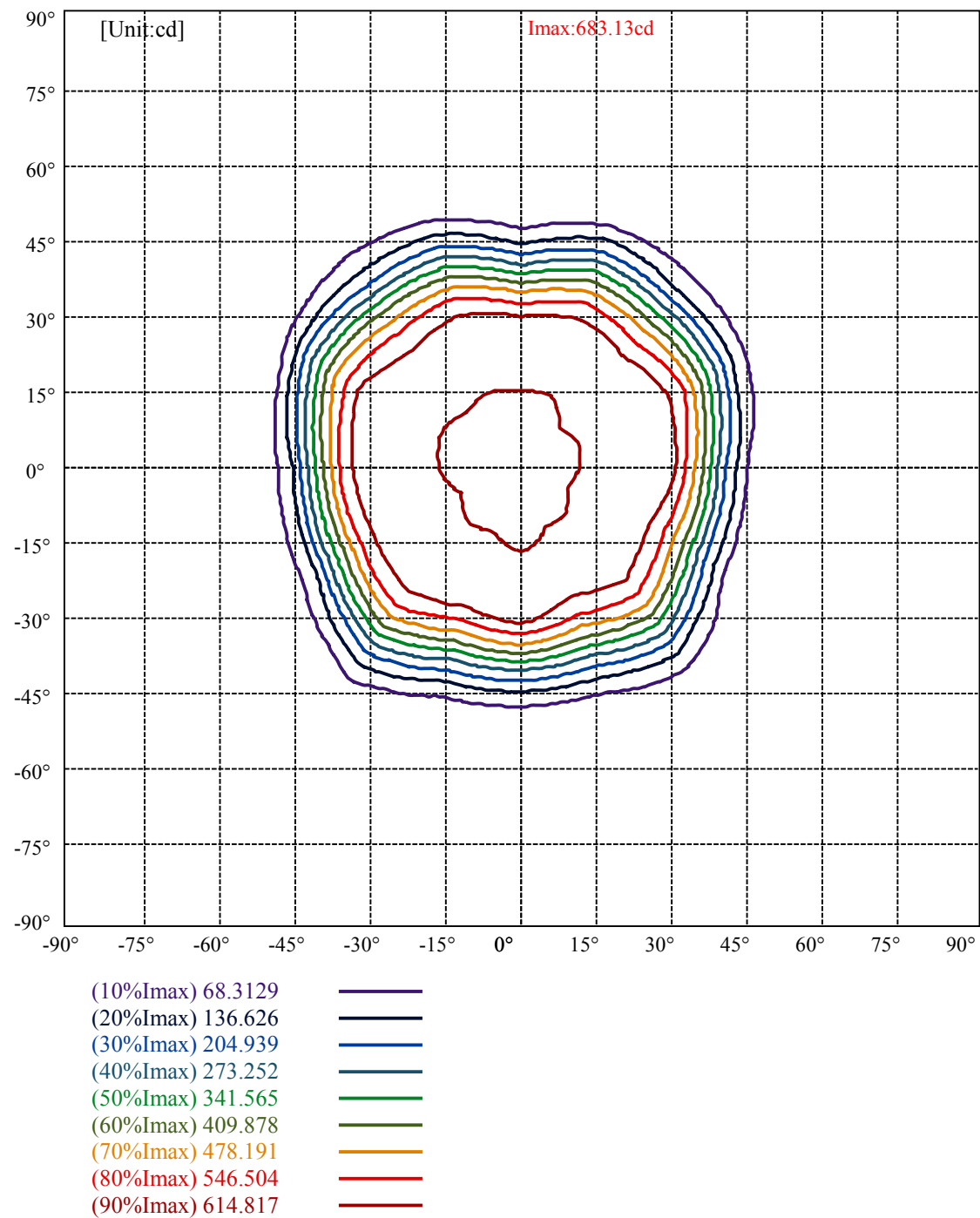
Zone	Lumens	%Lamp	%Fixt
0-30	533.12	47.35%	54.36%
0-40	840.74	74.67%	85.73%
0-60	978.28	86.88%	99.75%
0-90	980.33	87.06%	99.96%
0-120	980.33	87.06%	99.96%
0-180	980.72	87.10%	100.00%
60-90	2.05	0.18%	0.21%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-37.99	784.58	69.68%	80.00%

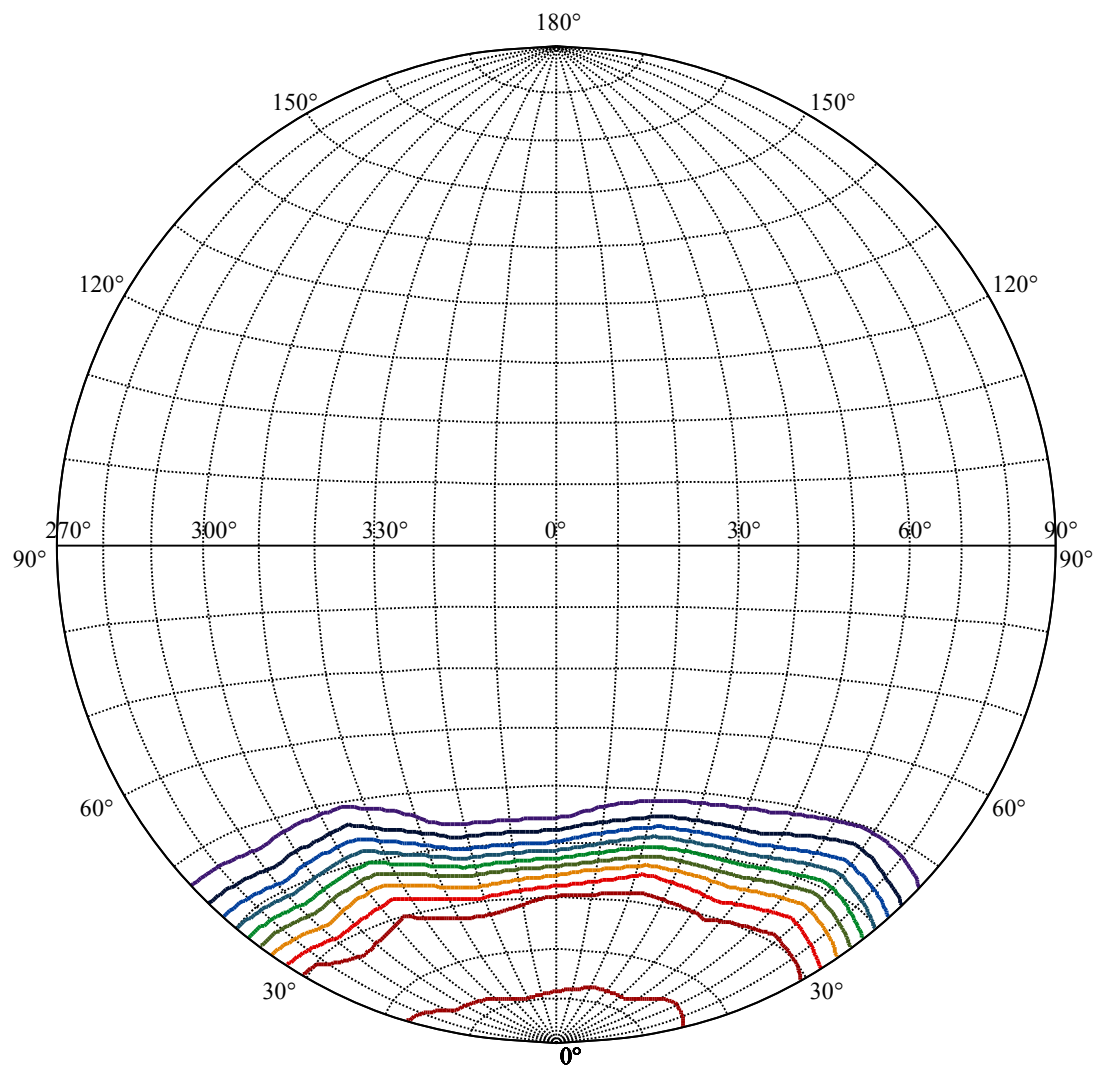
ZONAL LUMEN SUMMARY

0-10	56.13
10-20	176.46
20-30	300.53
30-40	307.62
40-50	125.98
50-60	11.57
60-70	0.87
70-80	0.78
80-90	0.39
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







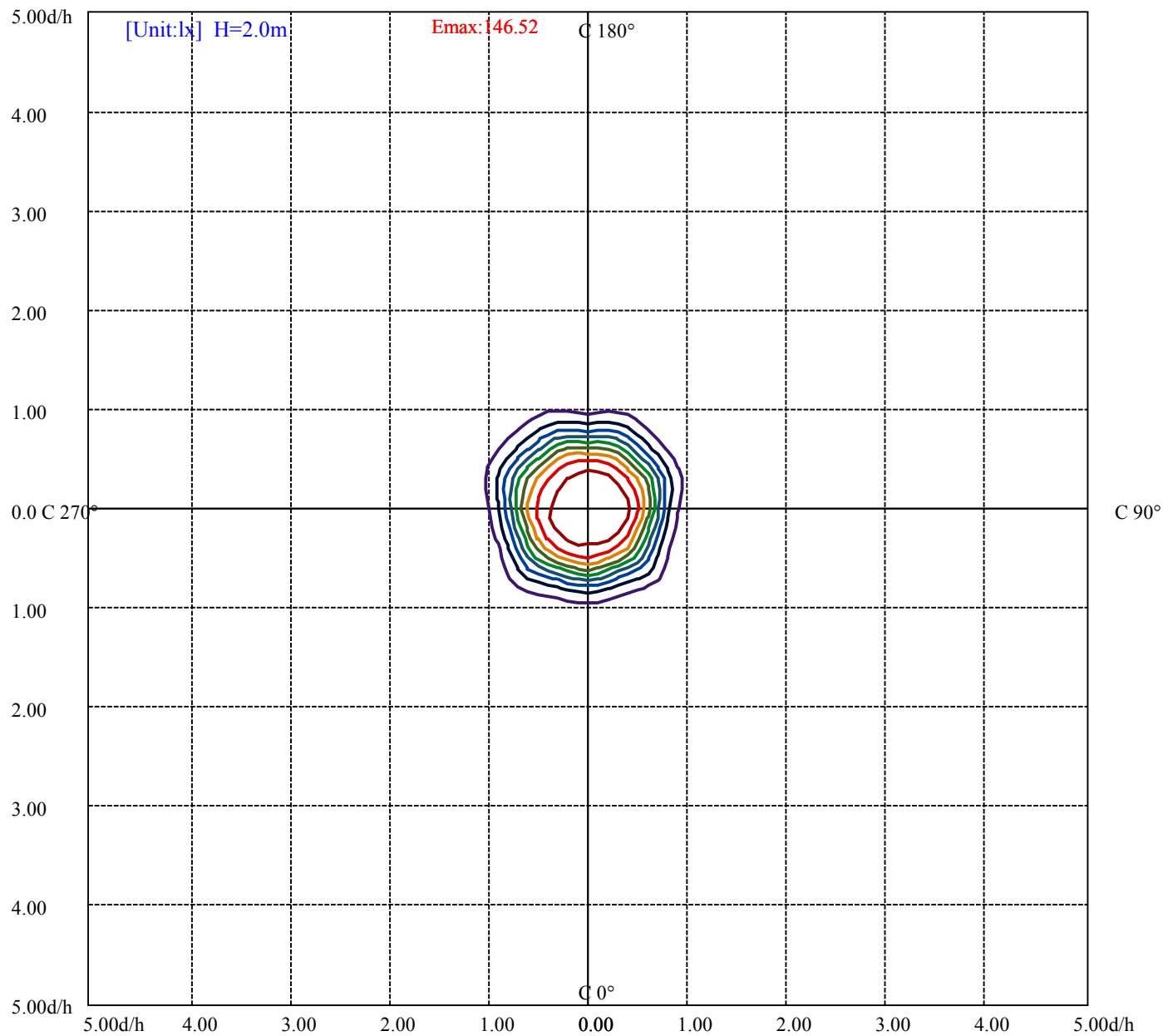


House

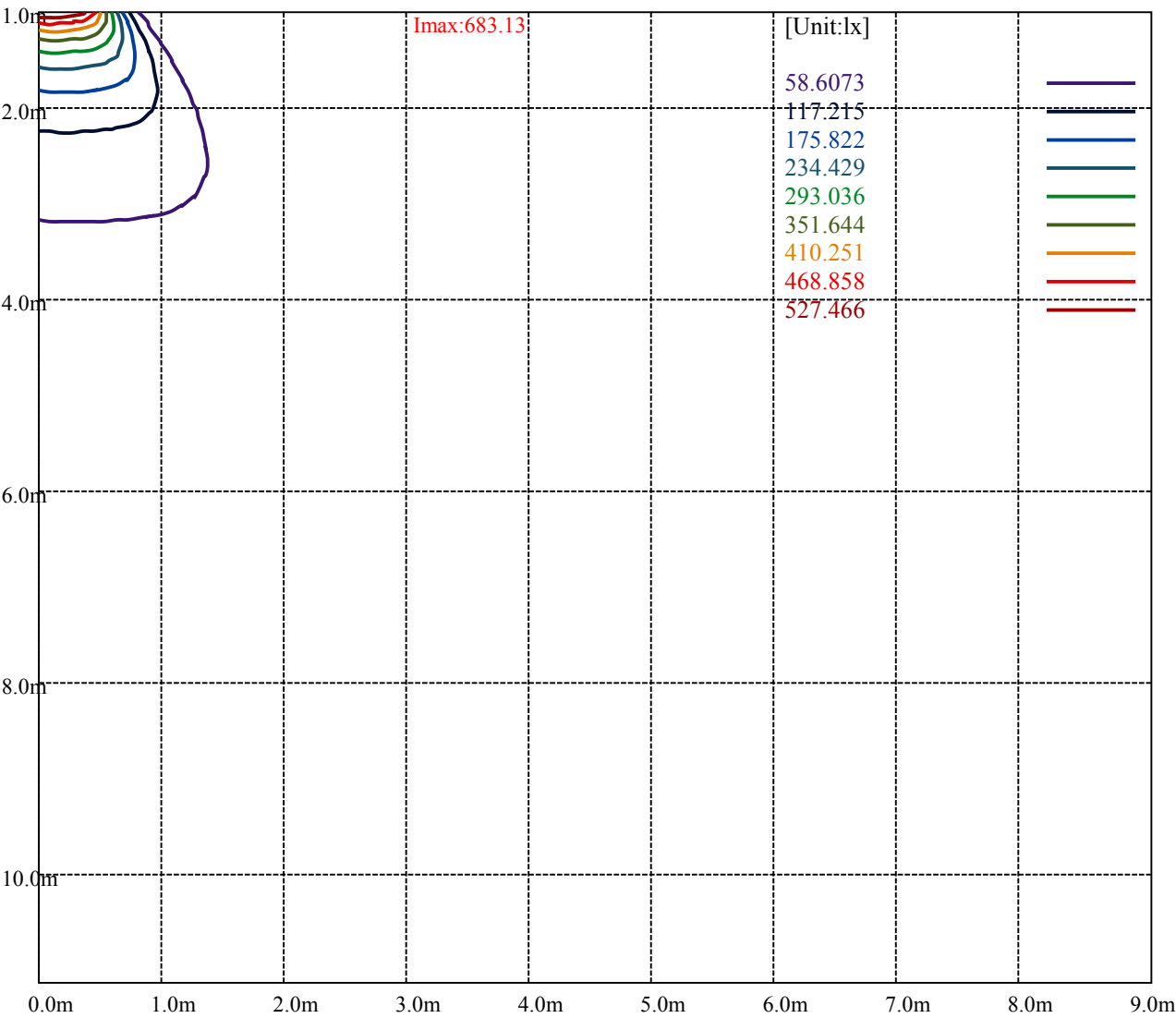
[Unit:cd]

Road

Imax:683.13	
(10%Imax) 68.5584	
(20%Imax) 137.117	
(30%Imax) 205.675	
(40%Imax) 274.234	
(50%Imax) 342.792	
(60%Imax) 411.35	
(70%Imax) 479.909	
(80%Imax) 548.467	
(90%Imax) 617.026	



(10%Emax)	14.65182	
(20%Emax)	29.30375	
(30%Emax)	43.9555	
(40%Emax)	58.60725	
(50%Emax)	73.259	
(60%Emax)	87.911	
(70%Emax)	102.5628	
(80%Emax)	117.2145	
(90%Emax)	131.8663	



Luminance Table

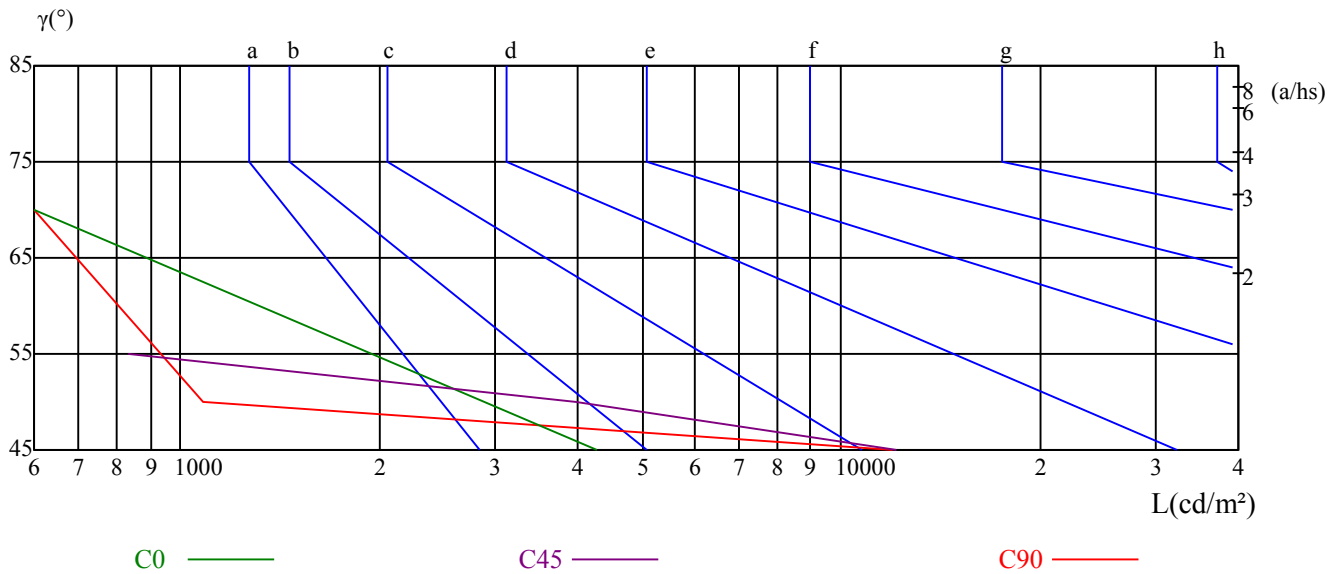
γ	45	50	55	60	65	70	75	80	85
C0	4275	0	0	0	0	74	82	91	103
C45	12179	3968	835	0	0	0	0	0	0
C90	11970	1083	0	0	0	166	207	279	430

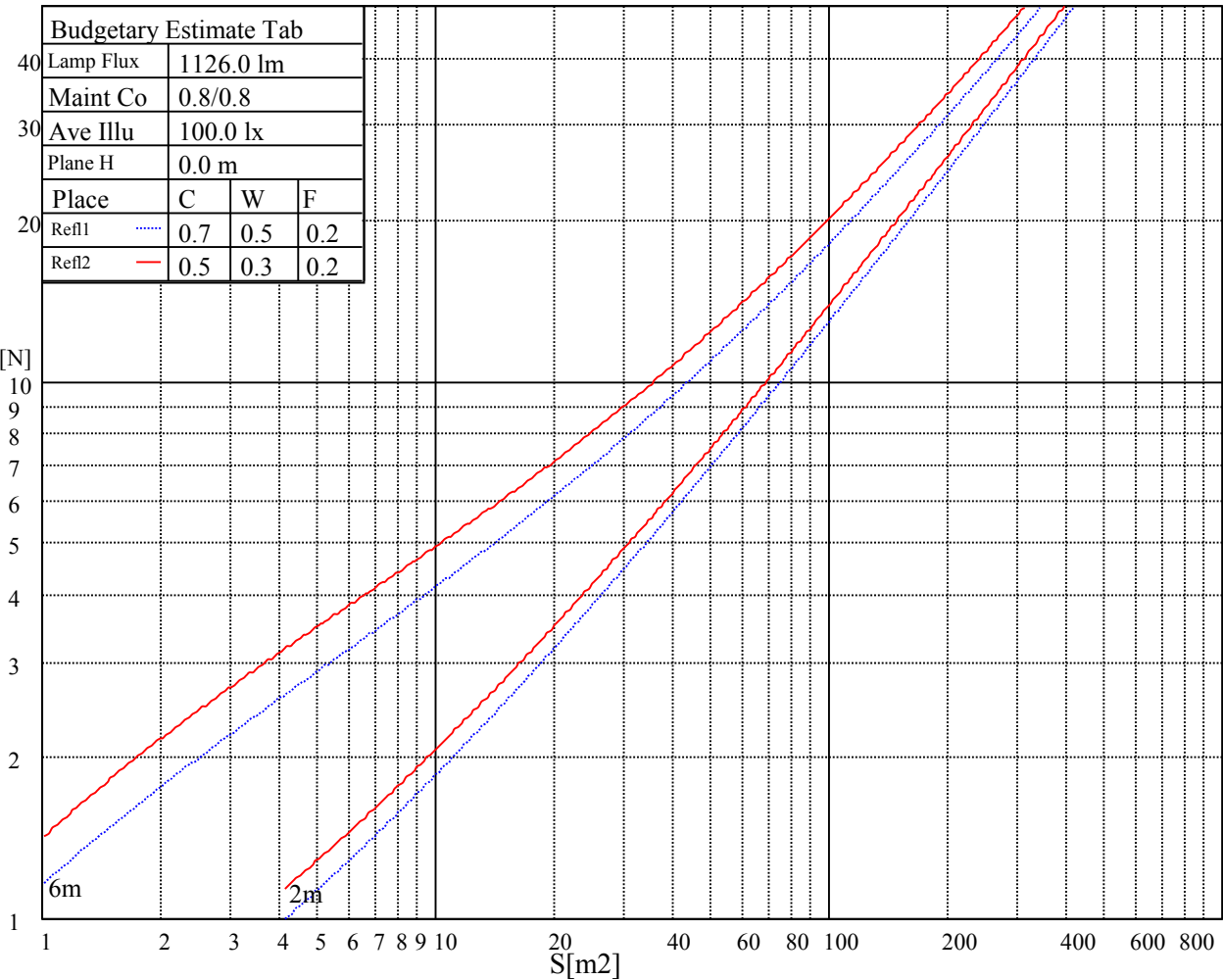
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	117	263	131	694	390	390

Glare Table

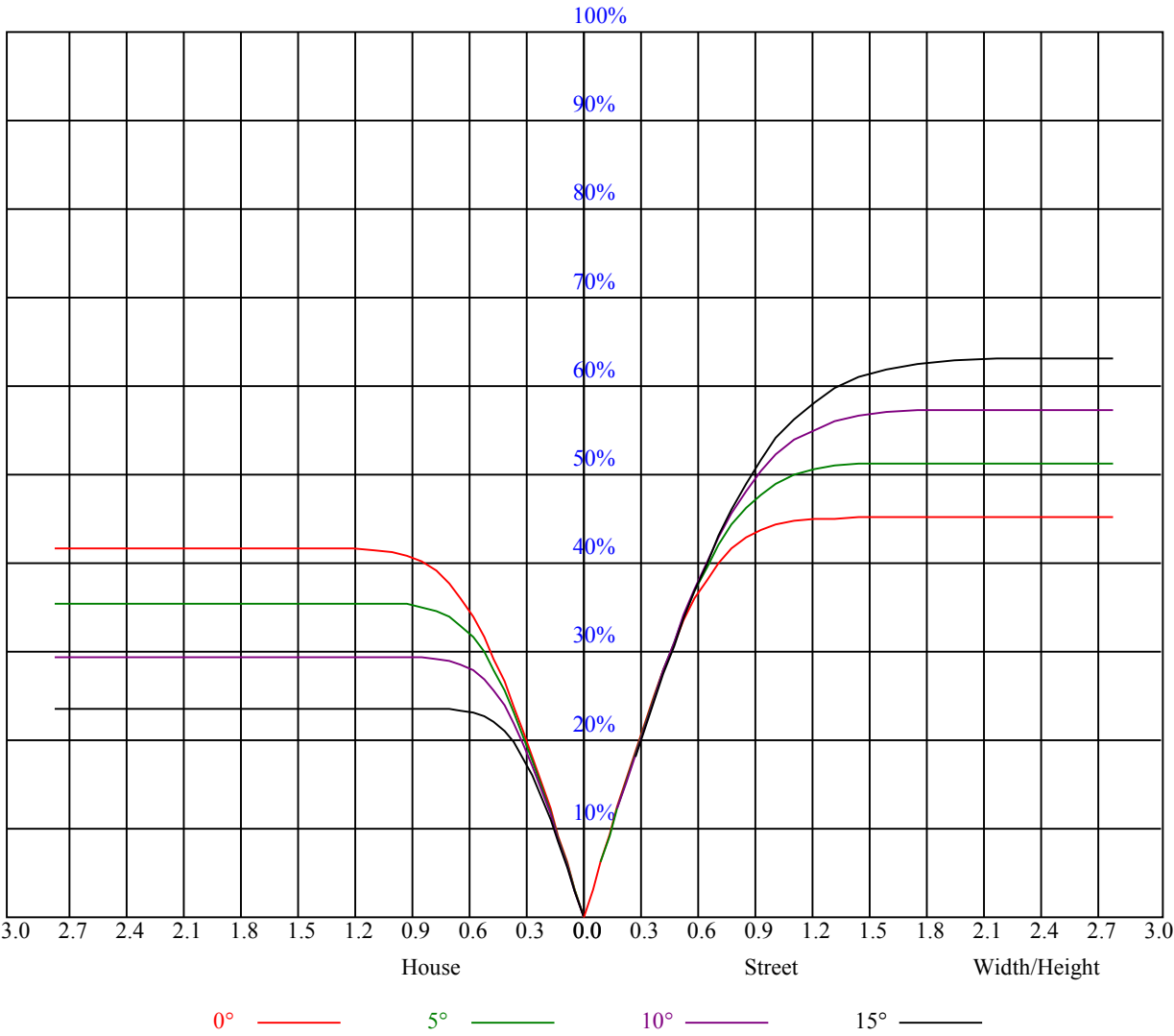
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

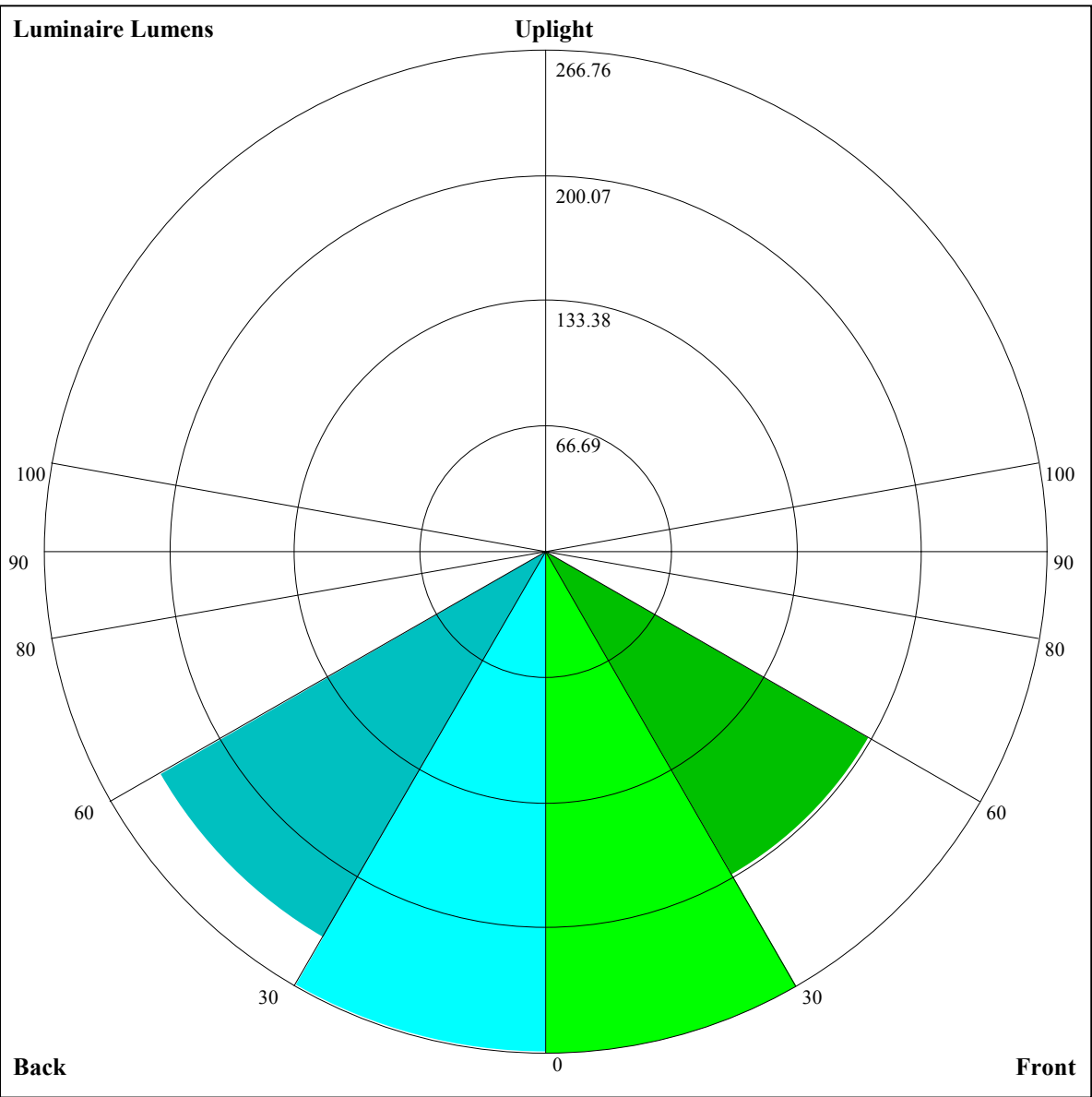
Luminance Limiting Curve





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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.04	1.04	1.04	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.87
1	0.96	0.93	0.91	0.94	0.92	0.90	0.90	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.80
2	0.88	0.84	0.81	0.87	0.83	0.80	0.84	0.81	0.78	0.81	0.79	0.77	0.79	0.77	0.75	0.73
3	0.81	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.67
4	0.75	0.69	0.65	0.74	0.69	0.65	0.72	0.68	0.64	0.70	0.66	0.63	0.68	0.65	0.63	0.61
5	0.69	0.63	0.59	0.68	0.63	0.59	0.67	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.56
6	0.64	0.58	0.54	0.63	0.58	0.54	0.62	0.57	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.51
7	0.59	0.53	0.49	0.59	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.55	0.51	0.48	0.47
8	0.55	0.49	0.45	0.54	0.49	0.45	0.53	0.48	0.45	0.52	0.48	0.45	0.52	0.47	0.44	0.43
9	0.51	0.45	0.42	0.51	0.45	0.41	0.50	0.45	0.41	0.49	0.44	0.41	0.48	0.44	0.41	0.40
10	0.48	0.42	0.38	0.47	0.42	0.38	0.47	0.42	0.38	0.46	0.41	0.38	0.45	0.41	0.38	0.37





Luminaire Lumens:

FL=266.76,FM=198.01,FH=0.8,FVH=0.4

BL=266.04,BM=237.41,BH=0.85,BVH=0.4

UL=0,UH=0

BUG Rating:B1-U0-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	578.85	590.79	606.78	634.63	667.56	683.13	629.38	447.24	209.40
22.5	579.19	589.86	605.09	625.40	651.73	673.57	655.62	553.38	354.90
45.0	579.45	594.26	611.78	630.14	654.18	661.55	606.11	498.53	320.87
67.5	571.74	577.41	594.34	612.88	643.26	666.29	640.81	537.46	374.28
90.0	564.97	575.21	590.03	614.23	647.58	661.80	610.34	460.95	263.74
112.5	577.08	578.68	591.72	609.66	633.87	660.19	653.00	561.25	399.75
135.0	576.48	577.84	593.07	613.47	633.11	649.27	630.74	550.84	409.15
157.5	583.59	577.84	589.43	605.09	627.52	652.32	663.41	622.19	488.88
180.0	578.85	578.09	590.19	607.97	636.83	671.70	677.12	577.16	358.28
202.5	579.19	585.37	602.89	623.80	652.83	675.09	650.97	532.30	327.56
225.0	579.45	578.35	596.80	614.06	635.31	662.05	651.39	575.55	425.06
247.5	571.74	579.45	598.74	620.33	650.46	664.76	604.92	452.82	266.19
270.0	564.97	568.02	583.68	604.58	638.61	658.75	632.60	472.12	263.57
292.5	577.08	591.30	603.82	624.39	644.20	644.36	573.27	419.98	238.01
315.0	576.48	587.57	605.26	623.04	641.74	651.14	615.33	509.62	341.27
337.5	583.59	597.30	615.16	642.67	668.49	659.85	564.80	402.97	191.12
360.0	578.85	590.79	606.78	634.63	667.56	683.13	629.38	447.24	209.40
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	50.70	3.22	1.02	0.76	0.76	0.68	0.68	0.68	0.68
22.5	153.88	25.48	2.29	0.93	0.85	0.68	0.68	0.68	0.68
45.0	139.06	45.54	7.03	1.10	0.76	0.76	0.76	0.76	0.76
67.5	197.30	63.48	5.25	1.18	0.93	0.76	0.76	0.76	0.76
90.0	104.78	9.73	1.61	0.93	0.76	0.76	0.76	0.76	0.76
112.5	223.20	81.76	7.36	1.35	0.93	0.85	0.76	0.76	0.76
135.0	219.05	90.14	26.66	1.95	0.85	0.76	0.76	0.68	0.76
157.5	286.08	87.35	10.58	1.61	0.85	0.76	0.76	0.68	0.68
180.0	132.72	19.47	1.78	0.93	0.68	0.68	0.68	0.68	0.68
202.5	112.83	17.27	1.61	0.85	0.76	0.76	0.68	0.68	0.68
225.0	239.19	90.65	21.50	2.29	0.85	0.76	0.76	0.76	0.76
247.5	108.68	14.73	1.52	0.93	0.85	0.76	0.76	0.76	0.68
270.0	105.88	9.90	1.52	0.93	0.76	0.76	0.76	0.76	0.76
292.5	93.10	10.75	1.35	0.93	0.76	0.76	0.76	0.68	0.76
315.0	171.82	54.59	7.19	1.18	0.85	0.76	0.76	0.76	0.76
337.5	38.17	2.71	0.93	0.76	0.76	0.76	0.68	0.76	0.68
360.0	50.70	3.22	1.02	0.76	0.76	0.68	0.68	0.68	0.68
C/ γ (°)	90.0								
0.0	0.68								
22.5	0.68								
45.0	0.76								
67.5	0.76								
90.0	0.76								
112.5	0.76								
135.0	0.76								
157.5	0.68								
180.0	0.68								
202.5	0.68								
225.0	0.76								
247.5	0.76								
270.0	0.76								
292.5	0.76								
315.0	0.68								
337.5	0.68								
360.0	0.68								