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Nata

Client: NT

LumCAT: 11-0161-S5

Luminaire: 69-0031-1

Report No: 20260803-B017

Ballast type: DC

Test No: 20260803-C017

Voltage(V): 22.130

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1126.0

Power (W): 10.047

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 966.72, Efficiency(%): 85.85% , Luminous Efficacy(lm/W): 96.22

Central intensity(cd): 663.070, Maximum intensity(cd): 665.609

Angle of maximum intensity: C=22.5 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=77.3

[C90/270]Total=76.4

Field angle(10%Imax): [C0/180]Total=95.7

[C90/270]Total=96.3

Maximum s/h(1/2): C0_180=1.24 C90_270=1.20

Maximum s/h(1/4): C0_180=1.15 C90_270=1.12

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 85.70%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.753%

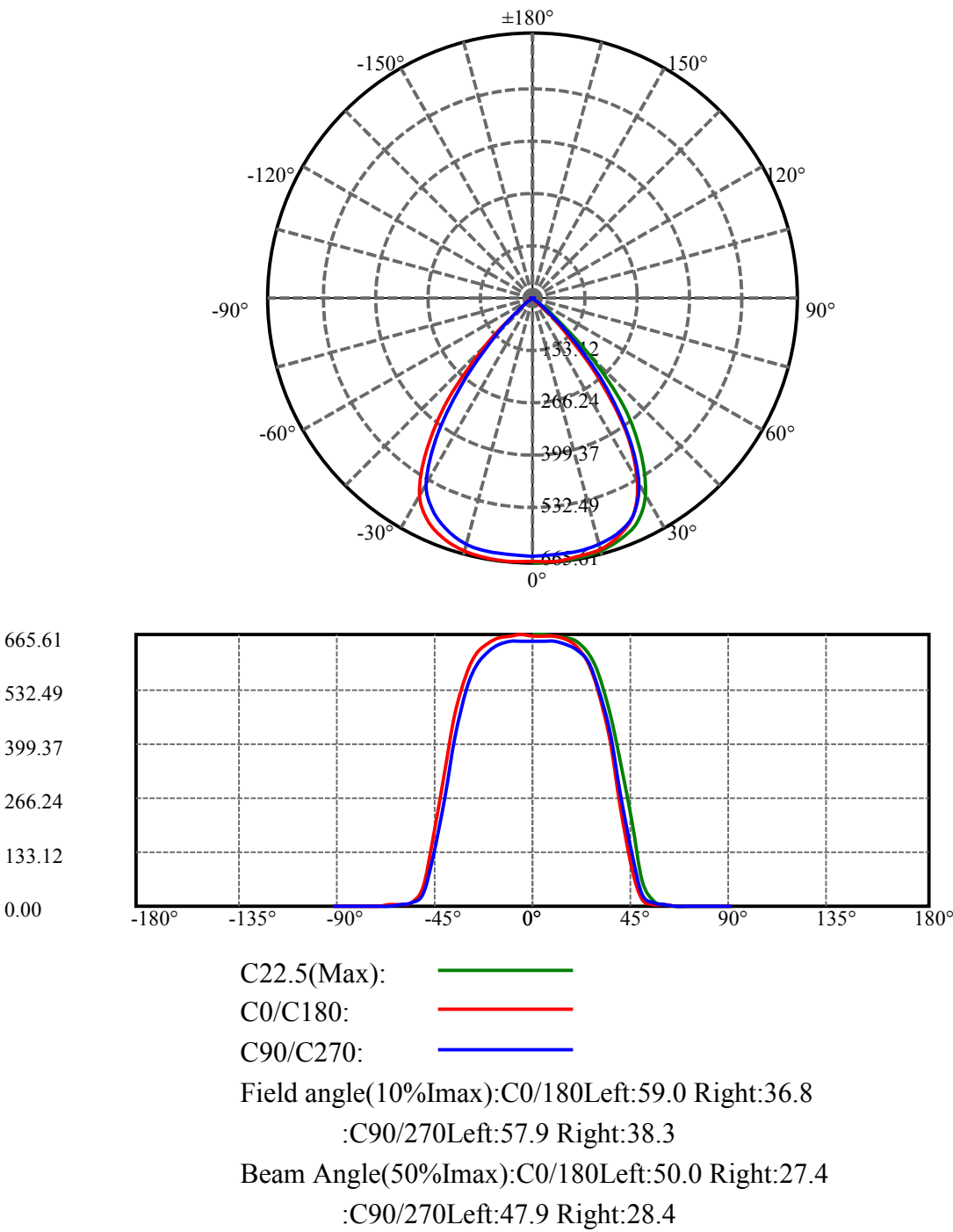
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	659.007	0.000	0	0.00%	0.00%
5.0	658.933	15.756	15.756	1.40%	1.63%
10.0	657.473	47.092	62.848	4.18%	6.50%
15.0	651.342	77.638	140.486	6.90%	14.53%
20.0	636.038	106.098	246.584	9.42%	25.51%
25.0	603.695	130.025	376.609	11.55%	38.96%
30.0	543.606	145.192	521.801	12.89%	53.98%
35.0	444.413	145.493	667.293	12.92%	69.03%
40.0	317.426	127.107	794.4	11.29%	82.17%
45.0	179.162	91.947	886.348	8.17%	91.69%
50.0	71.013	50.551	936.899	4.49%	96.92%
55.0	20.620	19.924	956.823	1.77%	98.98%
60.0	4.211	5.740	962.563	0.51%	99.57%
65.0	1.968	1.502	964.065	0.13%	99.73%
70.0	1.280	0.822	964.888	0.07%	99.81%
75.0	0.957	0.585	965.472	0.05%	99.87%
80.0	0.772	0.463	965.935	0.04%	99.92%
85.0	0.704	0.401	966.336	0.04%	99.96%
90.0	0.704	0.385	966.722	0.03%	100.00%

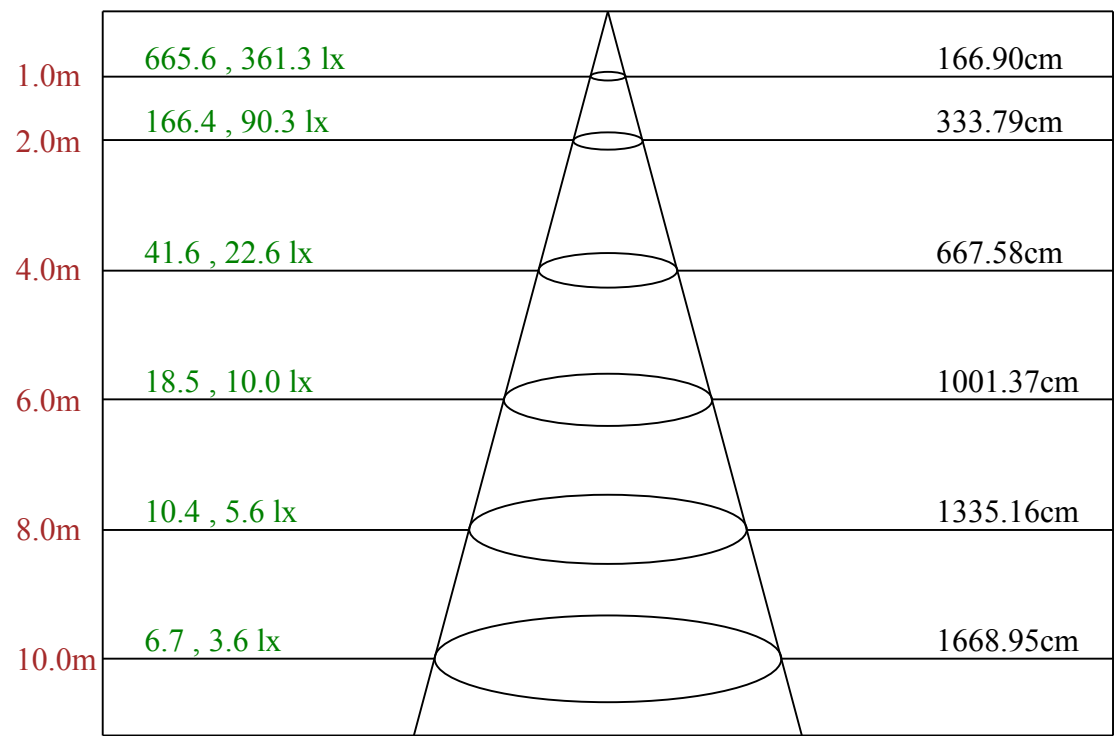
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	521.80	46.34%	53.98%
0-40	794.40	70.55%	82.17%
0-60	962.56	85.49%	99.57%
0-90	966.34	85.82%	99.96%
0-120	966.34	85.82%	99.96%
0-180	966.72	85.85%	100.00%
60-90	3.77	0.34%	0.39%
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%
0-39.17	773.38	68.68%	80.00%

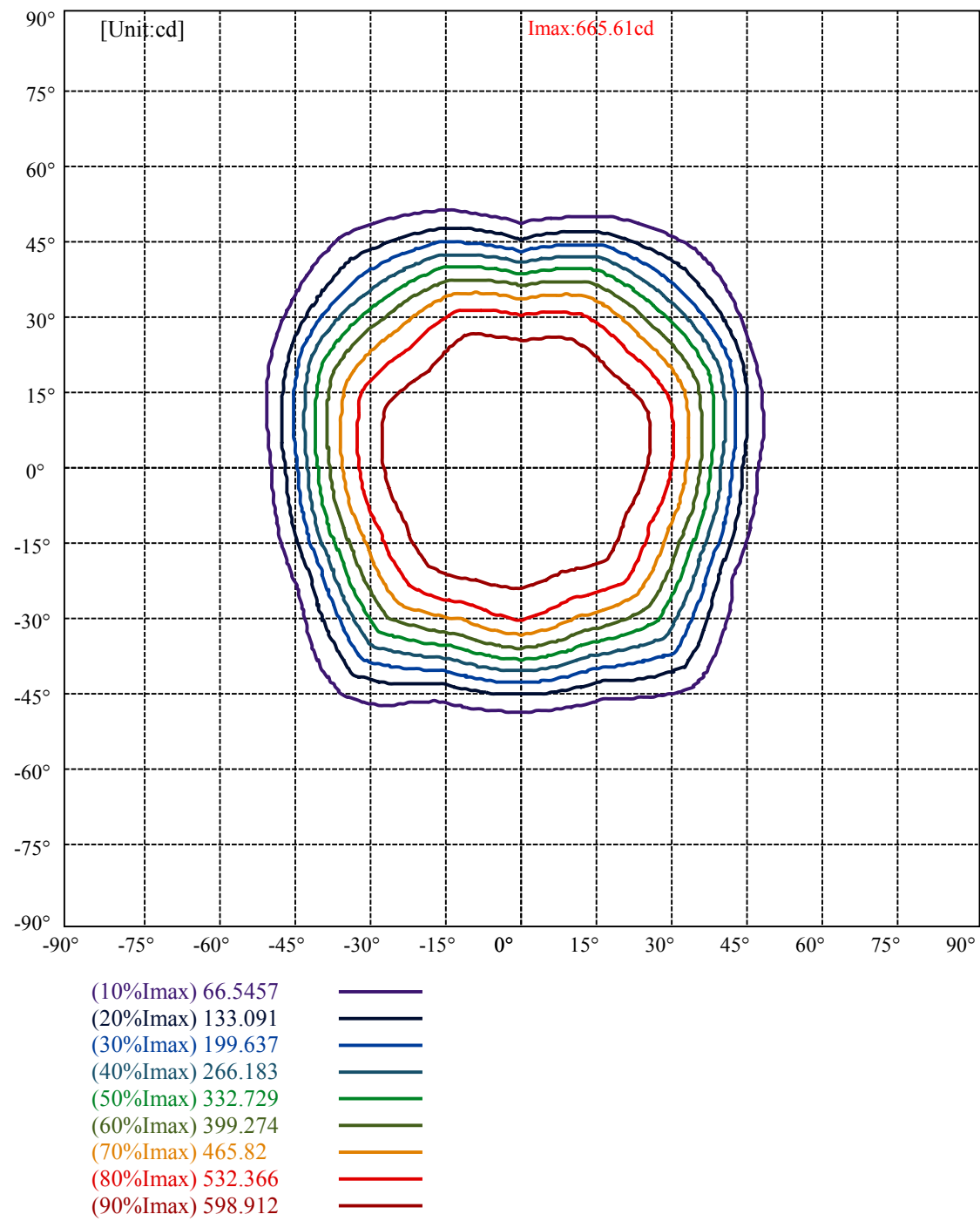
ZONAL LUMEN SUMMARY

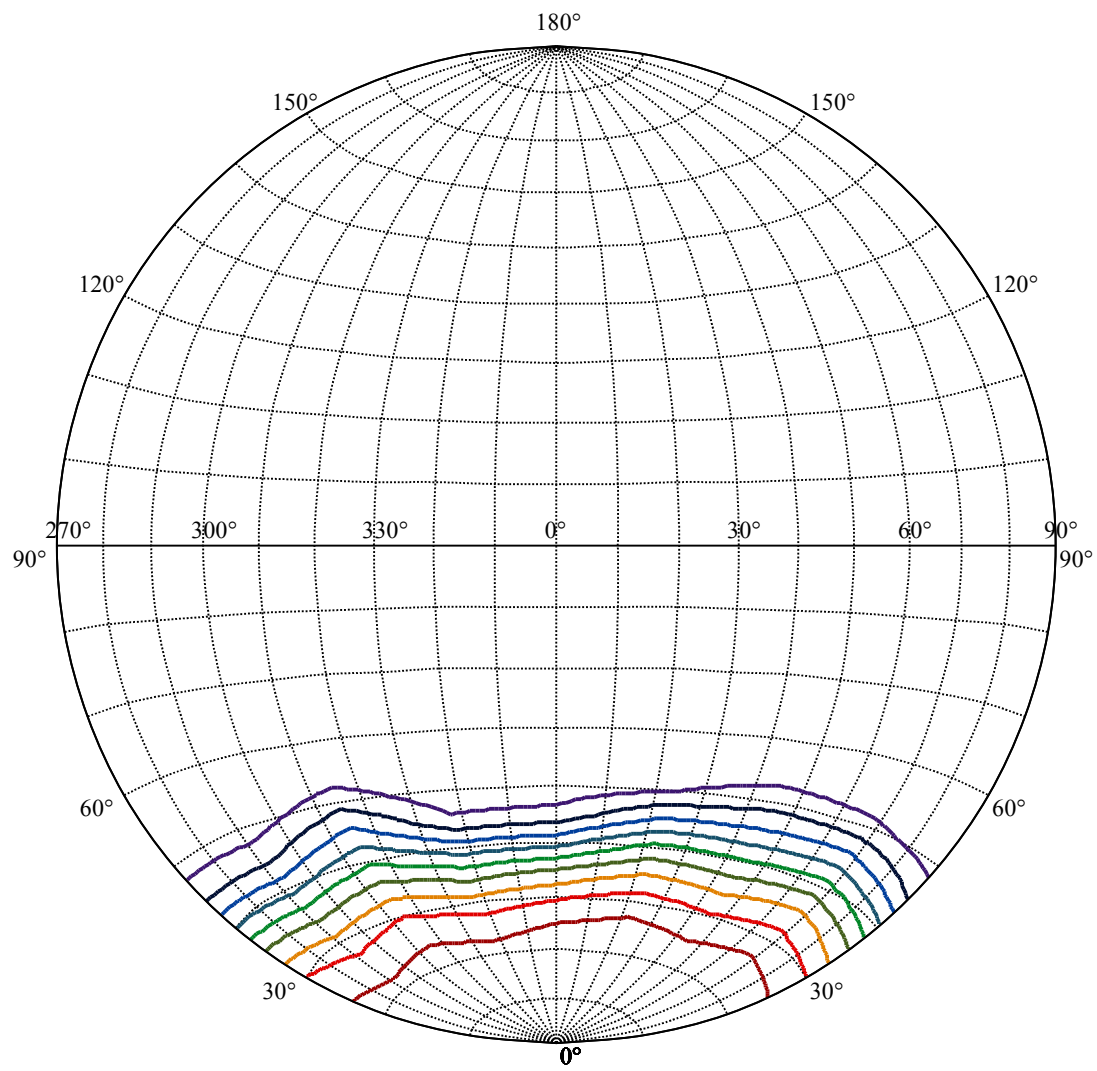
0-10	62.85
10-20	183.74
20-30	275.22
30-40	272.60
40-50	142.50
50-60	25.66
60-70	2.32
70-80	1.05
80-90	0.40
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C22.5 plane 79.69



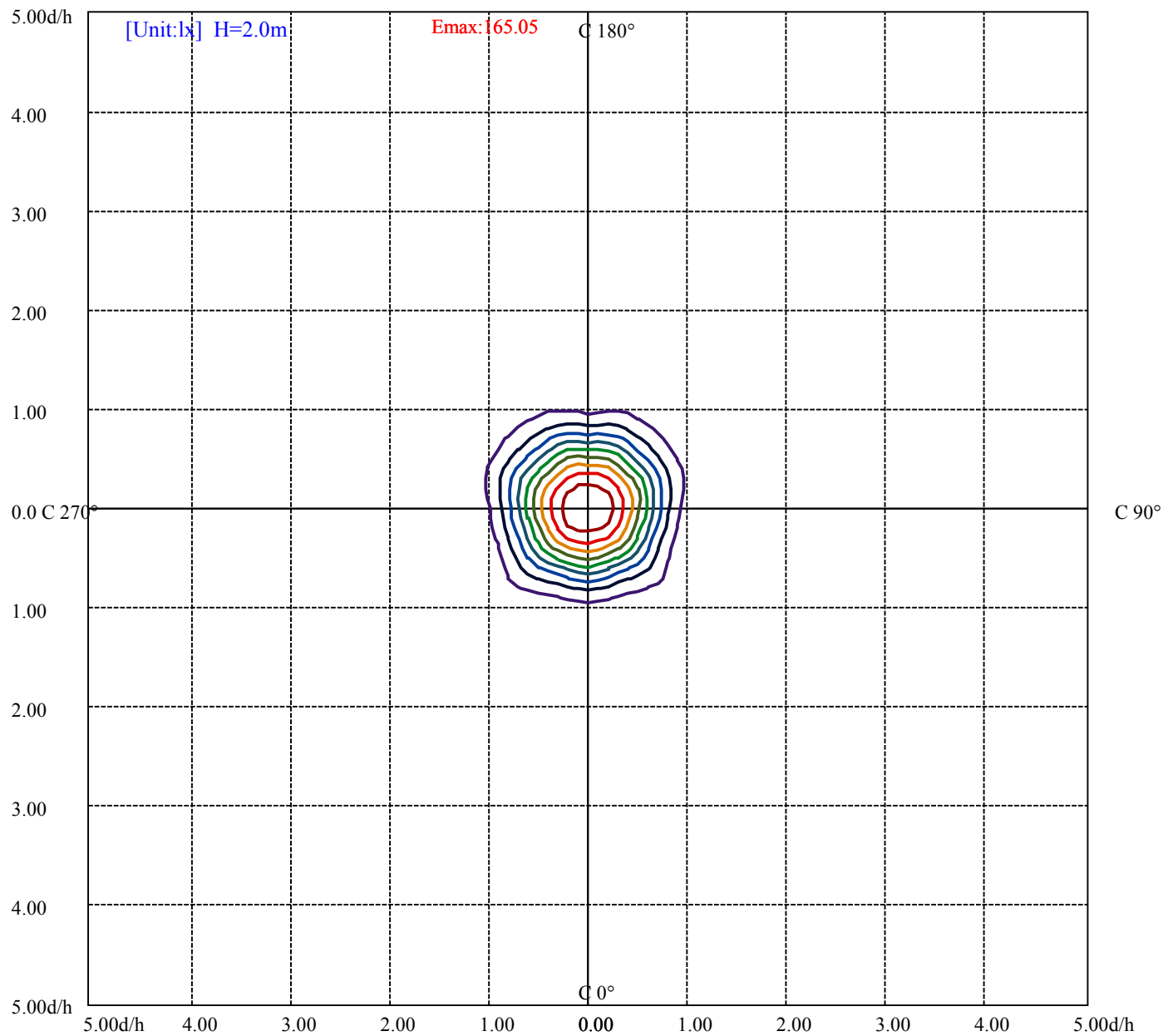


House

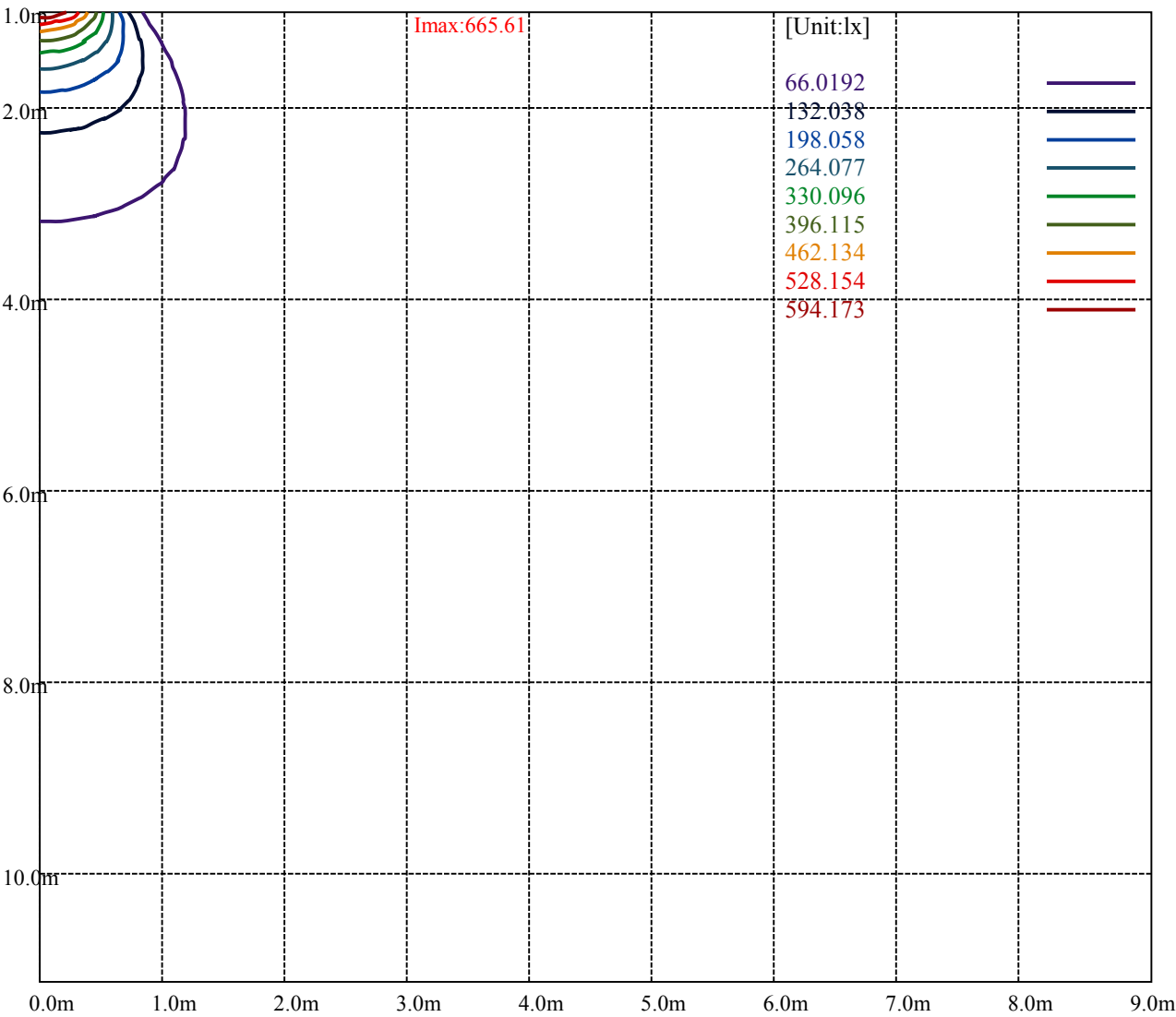
[Unit:cd]

Road

Imax:665.61	
(10%Imax) 66.5489	
(20%Imax) 133.098	
(30%Imax) 199.647	
(40%Imax) 266.195	
(50%Imax) 332.744	
(60%Imax) 399.293	
(70%Imax) 465.842	
(80%Imax) 532.391	
(90%Imax) 598.94	



(10%Emax)	16.50477	
(20%Emax)	33.0095	
(30%Emax)	49.51425	
(40%Emax)	66.01925	
(50%Emax)	82.524	
(60%Emax)	99.02875	
(70%Emax)	115.5335	
(80%Emax)	132.0383	
(90%Emax)	148.543	



Luminance Limiting Curve(no luminous side)

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Luminance Table

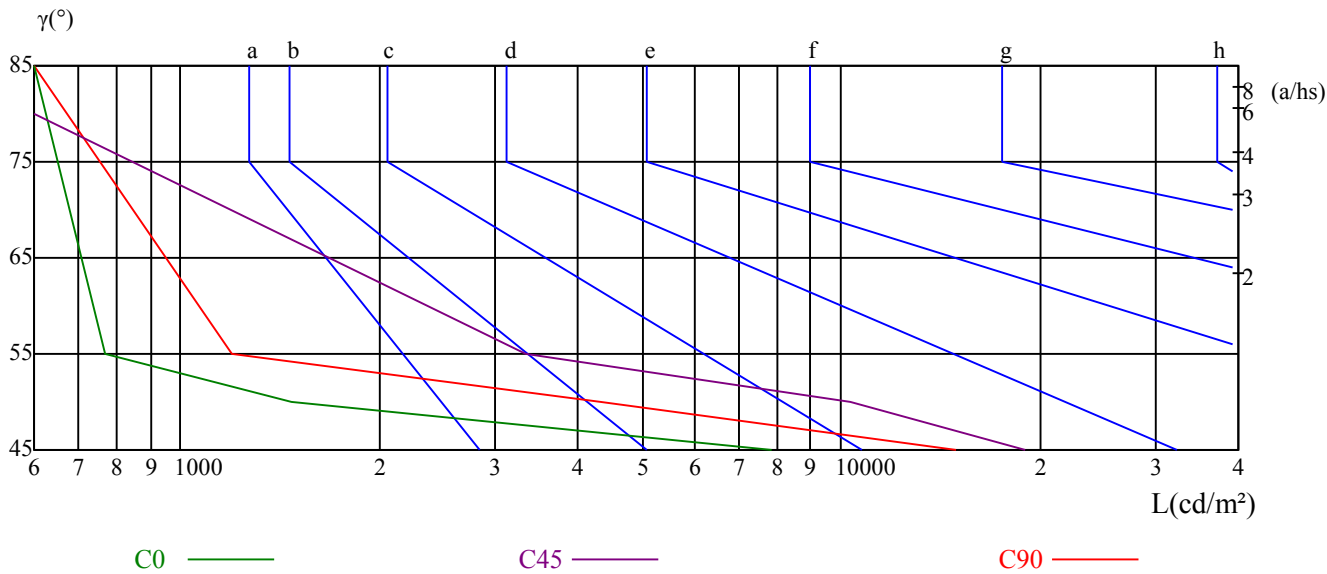
γ	45	50	55	60	65	70	75	80	85
C0	7837	1473	769	0	0	0	0	0	103
C45	19029	10316	3342	0	0	0	0	119	123
C90	14962	4334	1196	0	0	0	0	0	430

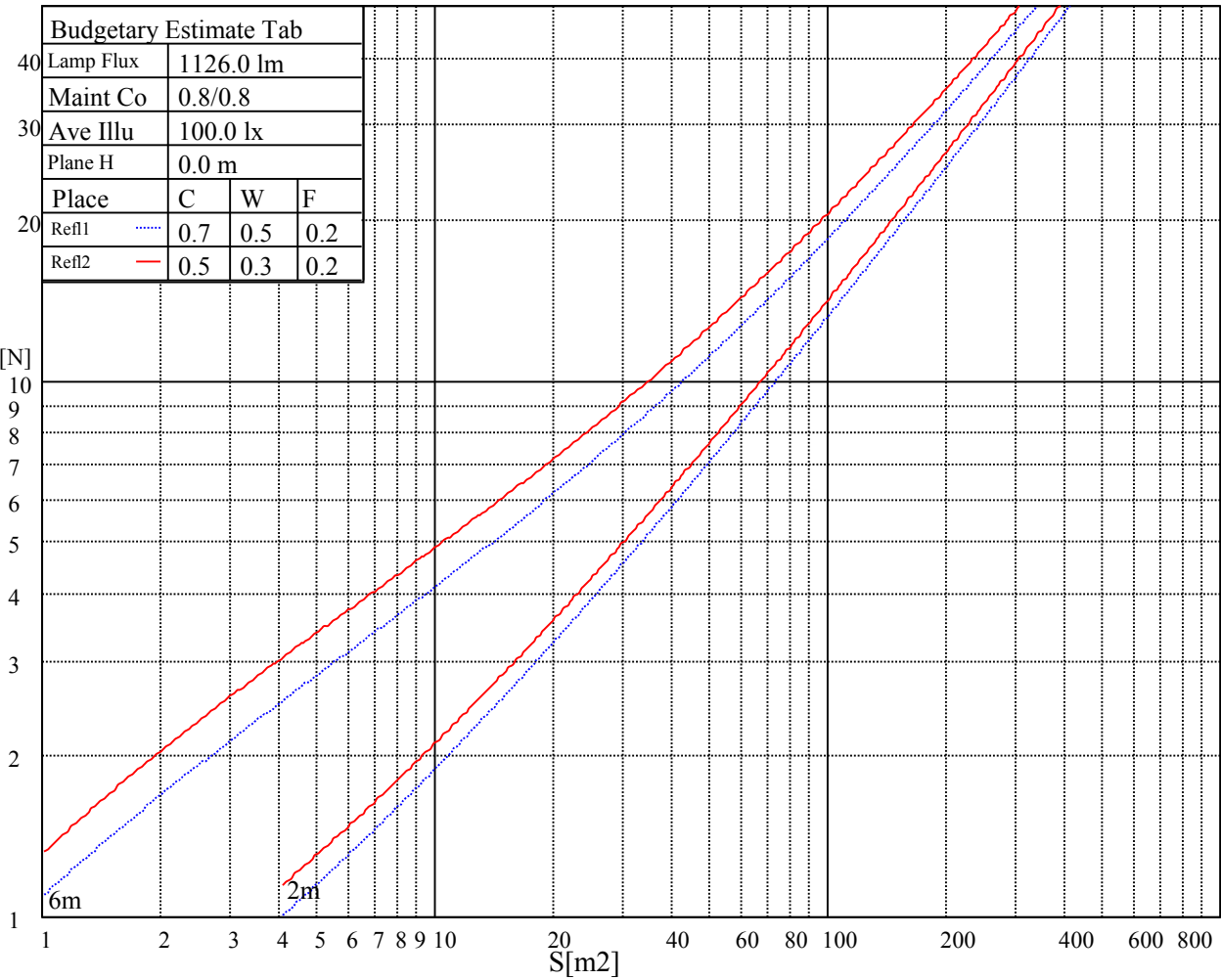
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	161	0	694	390	347

Glare Table

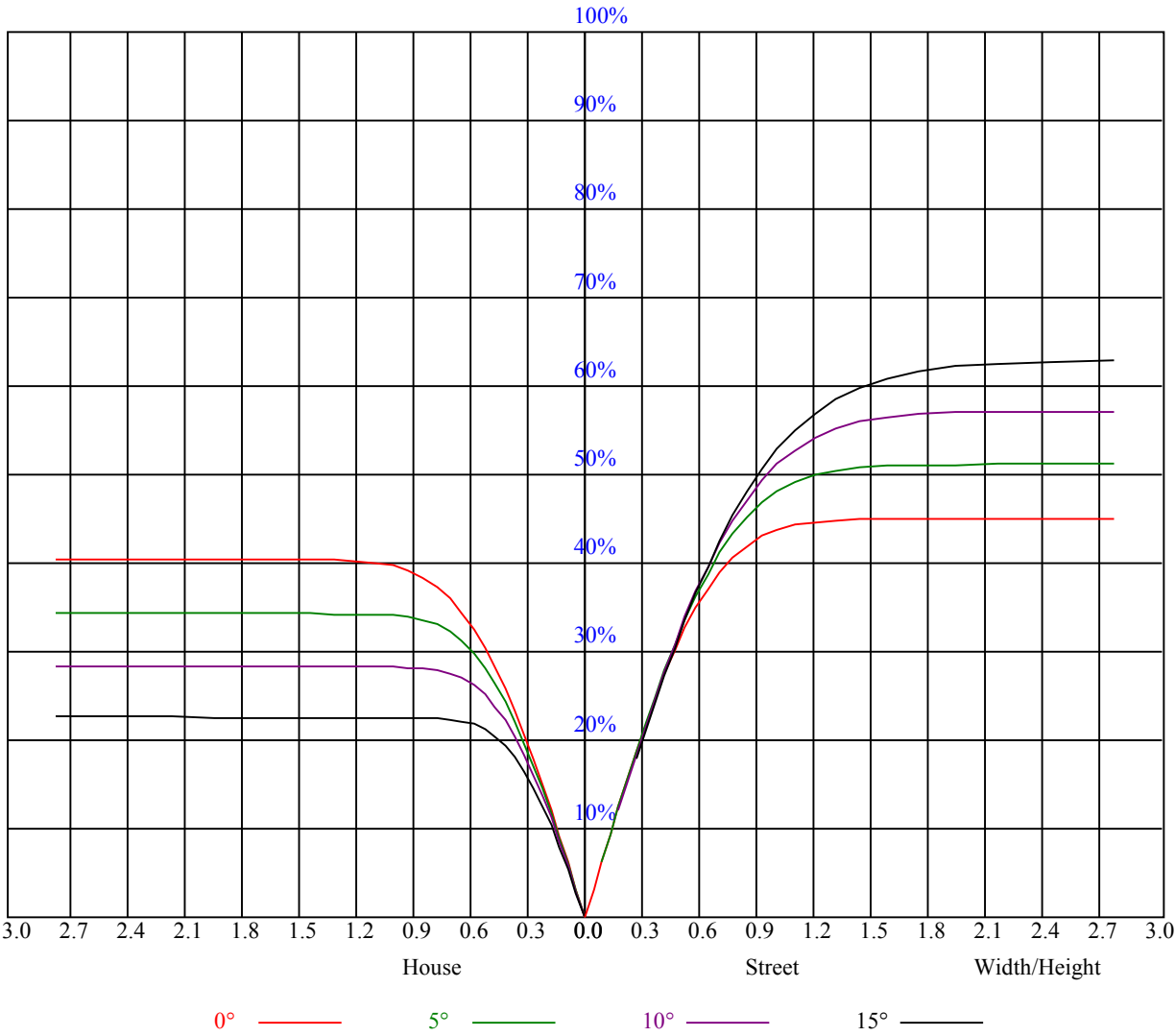
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

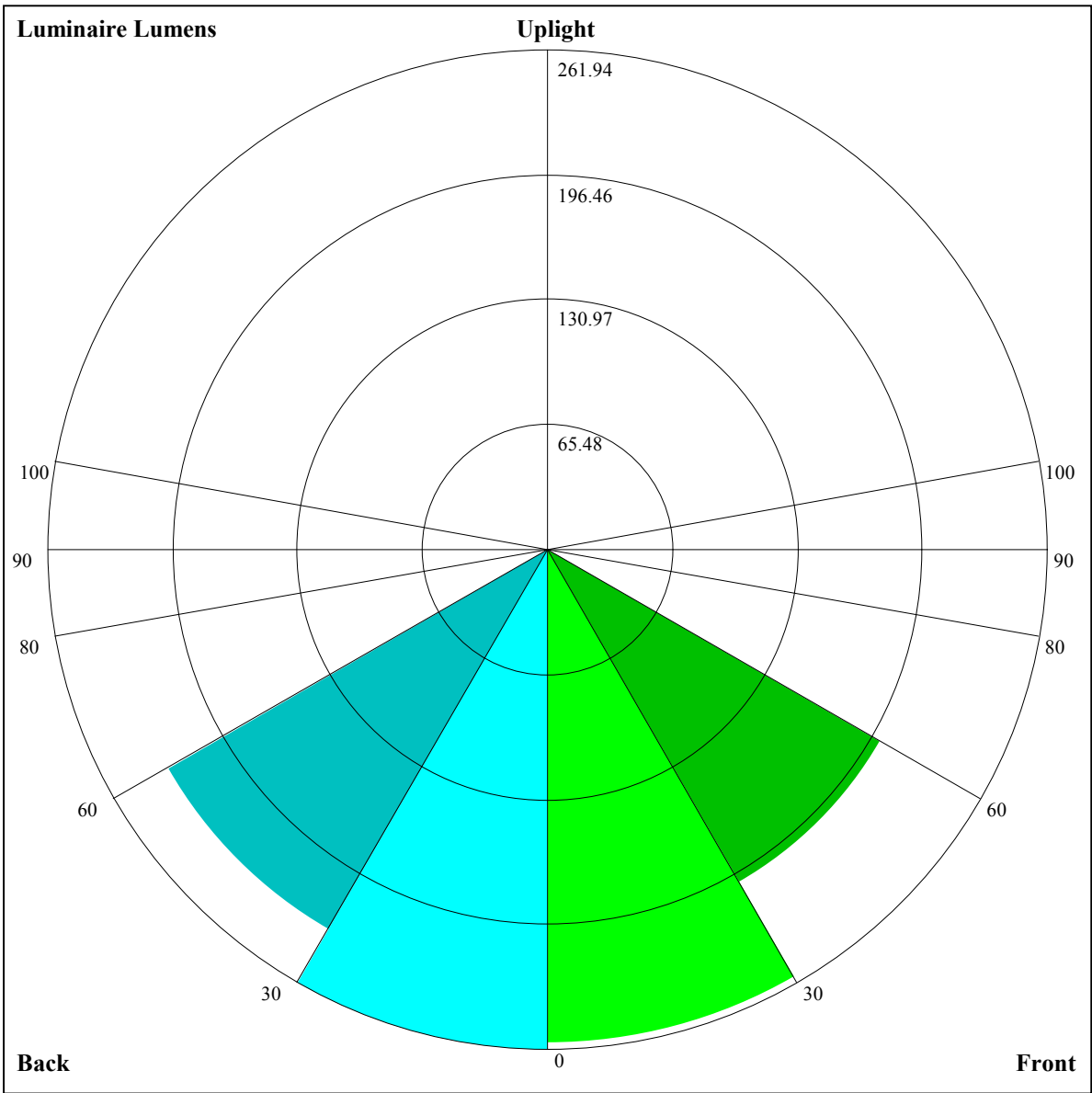
Luminance Limiting Curve





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	1.02	1.02	1.02	1.00	1.00	1.00	0.95	0.95	0.95	0.91	0.91	0.91	0.87	0.87	0.87	0.86
1	0.94	0.92	0.90	0.92	0.90	0.88	0.89	0.87	0.86	0.86	0.84	0.83	0.83	0.82	0.81	0.79
2	0.87	0.83	0.80	0.85	0.82	0.79	0.82	0.79	0.77	0.80	0.77	0.75	0.77	0.75	0.74	0.72
3	0.80	0.75	0.71	0.78	0.74	0.71	0.76	0.72	0.69	0.74	0.71	0.68	0.72	0.69	0.67	0.66
4	0.73	0.68	0.64	0.72	0.67	0.64	0.70	0.66	0.63	0.69	0.65	0.62	0.67	0.64	0.61	0.60
5	0.68	0.62	0.58	0.67	0.62	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.62	0.59	0.56	0.55
6	0.63	0.57	0.53	0.62	0.57	0.53	0.61	0.56	0.52	0.59	0.55	0.52	0.58	0.54	0.51	0.50
7	0.58	0.52	0.48	0.58	0.52	0.48	0.56	0.51	0.48	0.55	0.51	0.48	0.54	0.50	0.47	0.46
8	0.54	0.48	0.44	0.53	0.48	0.44	0.52	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.42
9	0.50	0.45	0.41	0.50	0.44	0.41	0.49	0.44	0.41	0.48	0.44	0.40	0.47	0.43	0.40	0.39
10	0.47	0.41	0.38	0.47	0.41	0.38	0.46	0.41	0.38	0.45	0.41	0.37	0.44	0.40	0.37	0.36





Luminaire Lumens:

FL=258.47,FM=201.47,FH=1.46,FVH=0.39

BL=261.94,BM=229.66,BH=1.87,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	663.07	662.65	660.70	653.42	635.39	597.05	526.21	405.51	244.27
22.5	665.61	663.92	662.39	658.58	647.41	621.85	569.71	470.51	354.47
45.0	661.55	660.19	658.50	652.49	638.10	604.75	543.39	451.13	337.38
67.5	655.37	655.54	655.45	652.41	643.60	621.09	570.47	486.76	365.48
90.0	648.85	648.51	647.50	641.74	628.54	598.74	532.98	424.89	276.26
112.5	659.43	659.77	658.84	656.55	646.90	626.17	584.78	498.95	379.61
135.0	656.30	656.47	655.28	649.27	635.73	608.73	558.54	480.33	379.44
157.5	661.88	662.82	662.39	659.94	651.05	631.50	591.97	525.70	422.52
180.0	663.07	663.83	662.22	656.89	644.87	619.14	569.29	469.33	331.79
202.5	665.61	665.61	664.42	655.71	637.25	601.20	535.77	435.81	305.72
225.0	661.55	662.48	662.14	657.65	643.09	612.62	556.34	474.07	370.13
247.5	655.37	655.96	654.44	647.50	627.94	587.82	507.42	392.64	256.12
270.0	648.85	648.85	647.07	642.08	624.56	589.52	533.40	412.87	264.75
292.5	659.43	658.84	656.47	642.67	618.21	568.61	491.59	377.49	240.21
315.0	656.30	656.04	654.69	647.92	631.41	595.70	533.32	431.07	321.63
337.5	661.88	661.46	657.06	646.65	622.53	574.62	492.52	373.52	229.04
360.0	663.07	662.65	660.70	653.42	635.39	597.05	526.21	405.51	244.27
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	89.72	16.67	5.08	2.29	1.44	1.10	0.85	0.68	0.68
22.5	205.93	61.96	11.17	3.98	1.95	1.35	0.93	0.76	0.68
45.0	211.52	111.72	30.81	3.39	1.69	1.10	0.85	0.76	0.68
67.5	226.07	87.09	20.06	5.25	2.37	1.44	1.02	0.85	0.76
90.0	129.50	30.56	7.53	3.13	1.95	1.27	0.93	0.76	0.76
112.5	240.55	111.39	26.15	6.01	2.79	1.69	1.18	0.85	0.76
135.0	255.10	148.88	69.07	7.79	2.12	1.35	1.02	0.76	0.68
157.5	288.88	127.72	31.99	7.28	3.05	1.78	1.18	0.85	0.68
180.0	164.12	44.61	9.99	4.15	2.20	1.44	1.02	0.76	0.68
202.5	145.07	39.95	9.31	3.39	1.86	1.18	0.93	0.76	0.68
225.0	256.54	143.55	56.54	7.19	2.12	1.35	1.02	0.85	0.76
247.5	121.46	32.59	6.52	2.79	1.69	1.18	0.93	0.76	0.68
270.0	121.04	28.69	6.77	3.05	1.78	1.18	0.93	0.76	0.76
292.5	112.74	27.08	5.59	2.37	1.44	1.02	0.85	0.76	0.68
315.0	220.74	109.44	29.03	3.22	1.69	1.10	0.93	0.76	0.68
337.5	77.61	14.30	4.32	2.12	1.35	0.93	0.76	0.68	0.68
360.0	89.72	16.67	5.08	2.29	1.44	1.10	0.85	0.68	0.68
C/ γ (°)	90.0								
0.0	0.68								
22.5	0.68								
45.0	0.68								
67.5	0.68								
90.0	0.76								
112.5	0.76								
135.0	0.68								
157.5	0.68								
180.0	0.68								
202.5	0.68								
225.0	0.76								
247.5	0.76								
270.0	0.68								
292.5	0.68								
315.0	0.76								
337.5	0.68								
360.0	0.68								