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Nata

Client: NT

LumCAT: 11-0161-S5

Luminaire: 69-0030-1

Report No: 20260803-B006

Ballast type: DC

Test No: 20260803-C006

Voltage(V): 22.160

LampCAT: LUXEON 2835*2

Current(A): 0.454

Lamp flux(lm): 1126.0

Power (W): 10.060

Number of Lamps: 1

PF: 0.000

Length(mm): 280

Width(mm): 40

Phm Type: C

Height(mm): 20

Photometric Results

Lumens(lm): 991.82, Efficiency(%): 88.08% , Luminous Efficacy(lm/W): 98.59

Central intensity(cd): 986.395, Maximum intensity(cd): 989.357

Angle of maximum intensity: C=157.5 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=61.6

[C90/270]Total=61.8

Field angle(10%Imax): [C0/180]Total=89.6

[C90/270]Total=89.9

Maximum s/h(1/2): C0_180=0.95 C90_270=0.95

Maximum s/h(1/4): C0_180=0.96 C90_270=0.93

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 88.01%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.622%

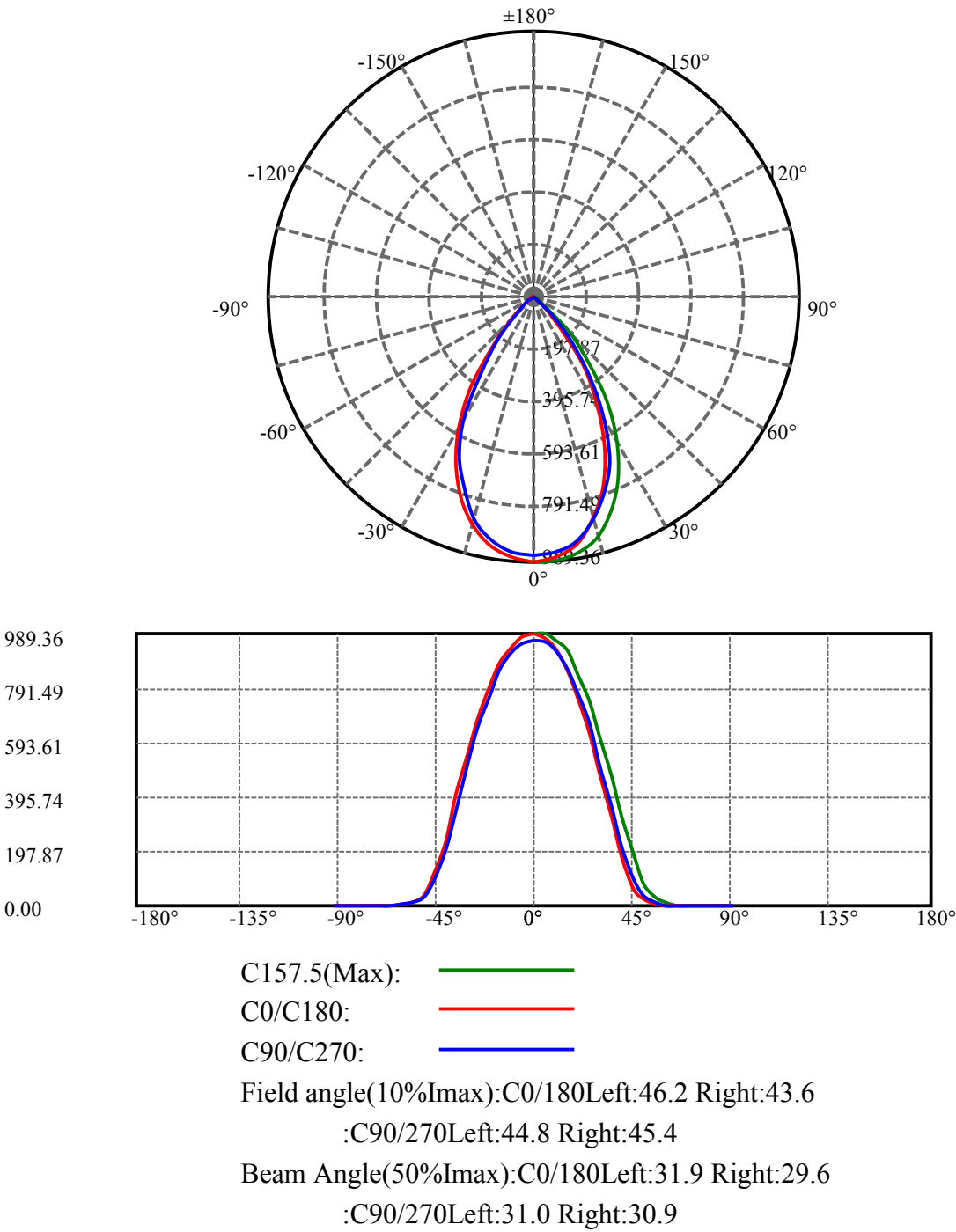
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	980.597	0.000	0	0.00%	0.00%
5.0	969.197	23.309	23.309	2.07%	2.35%
10.0	933.870	68.079	91.388	6.05%	9.21%
15.0	871.231	107.077	198.465	9.51%	20.01%
20.0	777.503	135.879	334.344	12.07%	33.71%
25.0	659.642	150.730	485.074	13.39%	48.91%
30.0	517.468	148.964	634.038	13.23%	63.93%
35.0	371.014	130.835	764.874	11.62%	77.12%
40.0	234.426	101.013	865.887	8.97%	87.30%
45.0	121.972	65.990	931.877	5.86%	93.96%
50.0	50.916	34.935	966.811	3.10%	97.48%
55.0	18.012	14.987	981.799	1.33%	98.99%
60.0	5.507	5.436	987.235	0.48%	99.54%
65.0	1.857	1.790	989.025	0.16%	99.72%
70.0	1.227	0.781	989.806	0.07%	99.80%
75.0	1.000	0.582	990.388	0.05%	99.86%
80.0	0.873	0.501	990.889	0.04%	99.91%
85.0	0.852	0.469	991.358	0.04%	99.95%
90.0	0.846	0.465	991.823	0.04%	100.00%

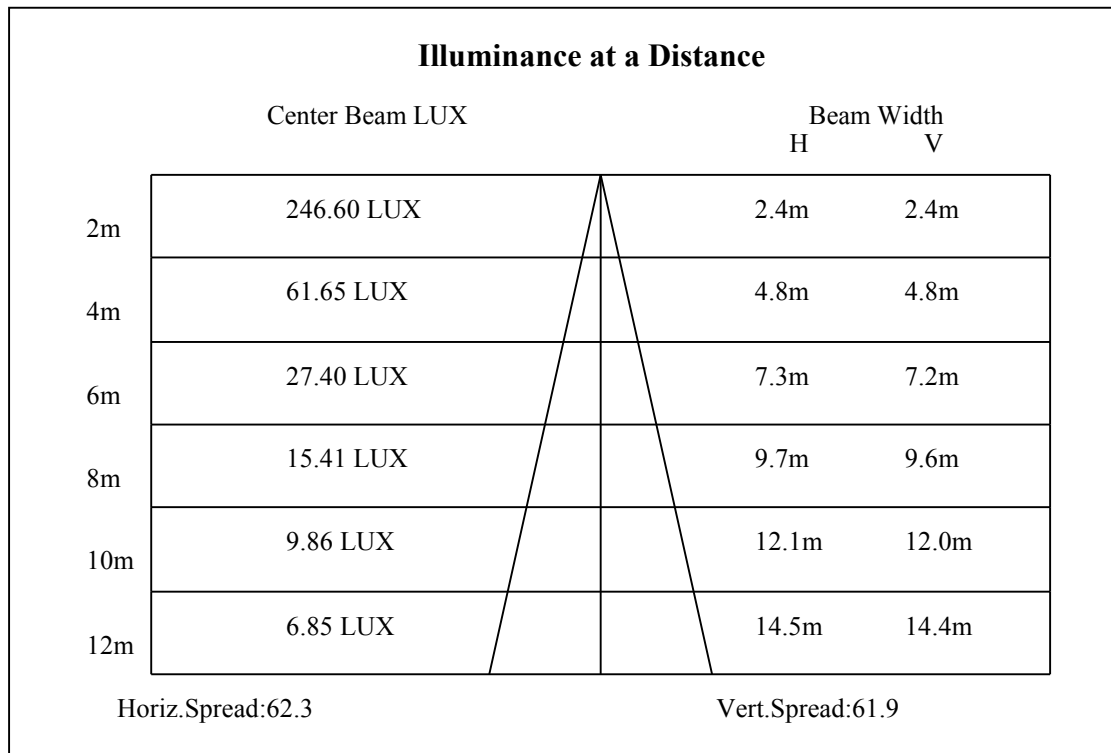
ZONAL LUMEN SUMMARY

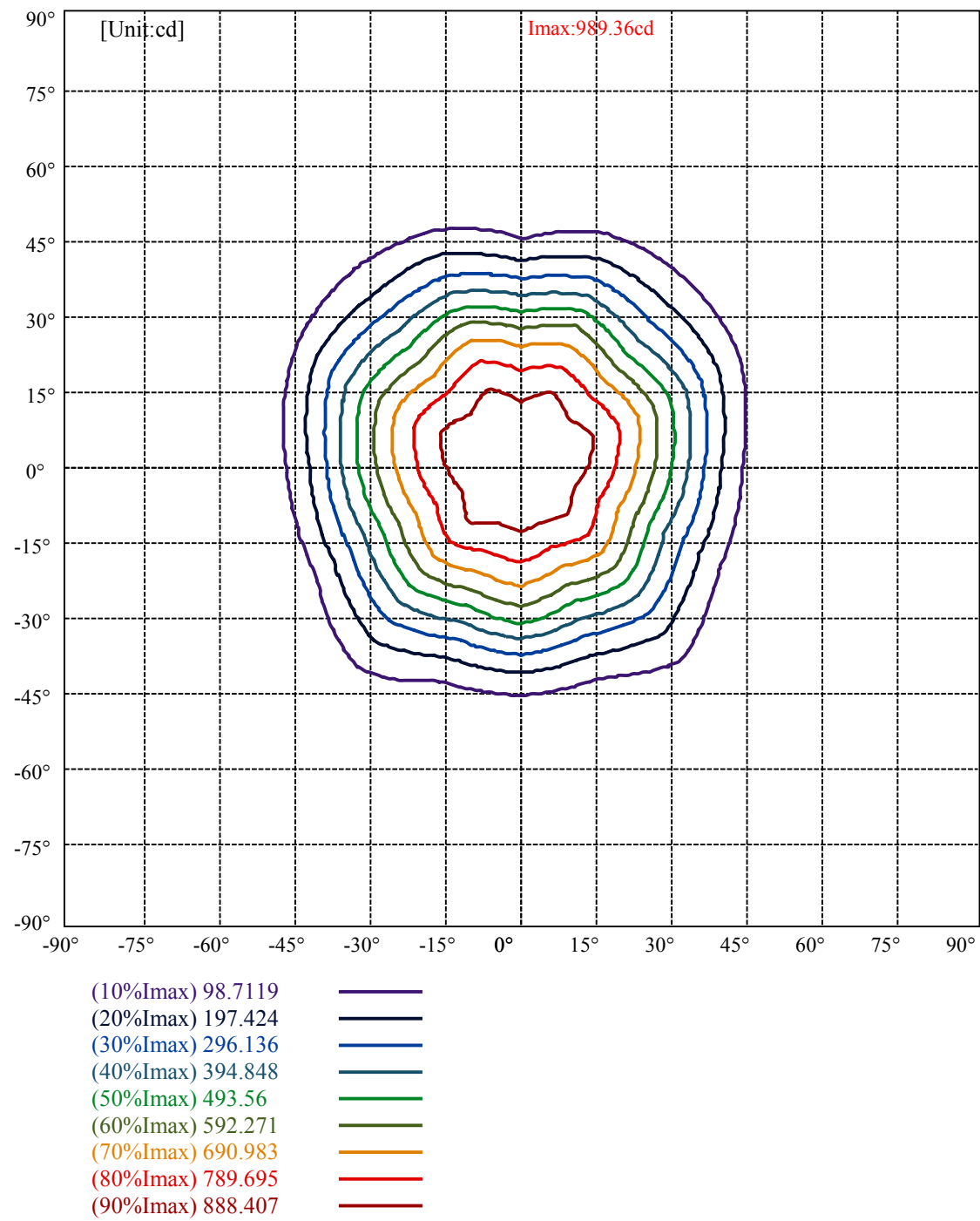
Zone	Lumens	%Lamp	%Fixt
0-30	634.04	56.31%	63.93%
0-40	865.89	76.90%	87.30%
0-60	987.23	87.68%	99.54%
0-90	991.36	88.04%	99.95%
0-120	991.36	88.04%	99.95%
0-180	991.82	88.08%	100.00%
60-90	4.12	0.37%	0.42%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-36.41	793.46	70.47%	80.00%

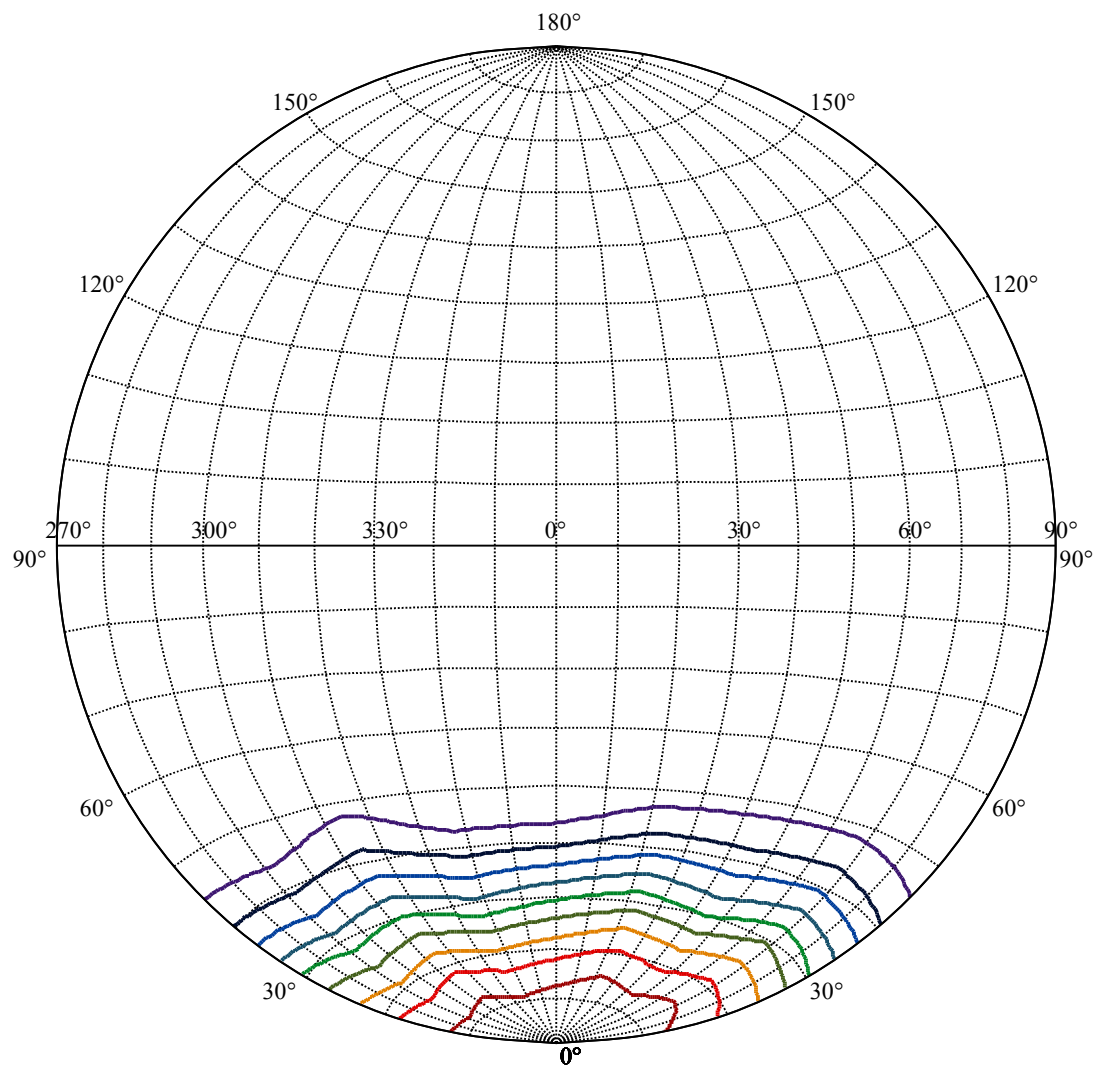
ZONAL LUMEN SUMMARY

0-10	91.39
10-20	242.96
20-30	299.69
30-40	231.85
40-50	100.92
50-60	20.42
60-70	2.57
70-80	1.08
80-90	0.47
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







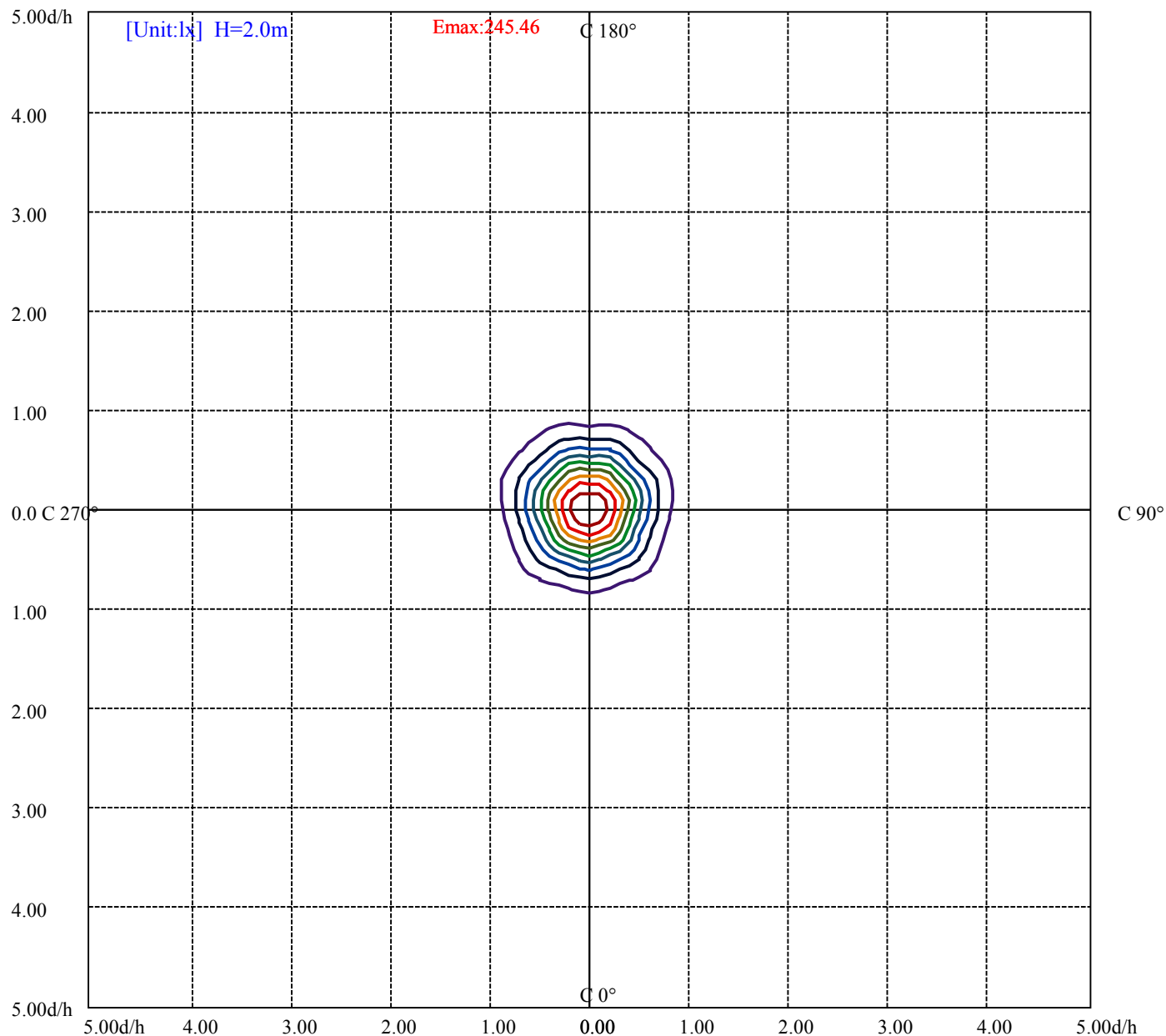


House

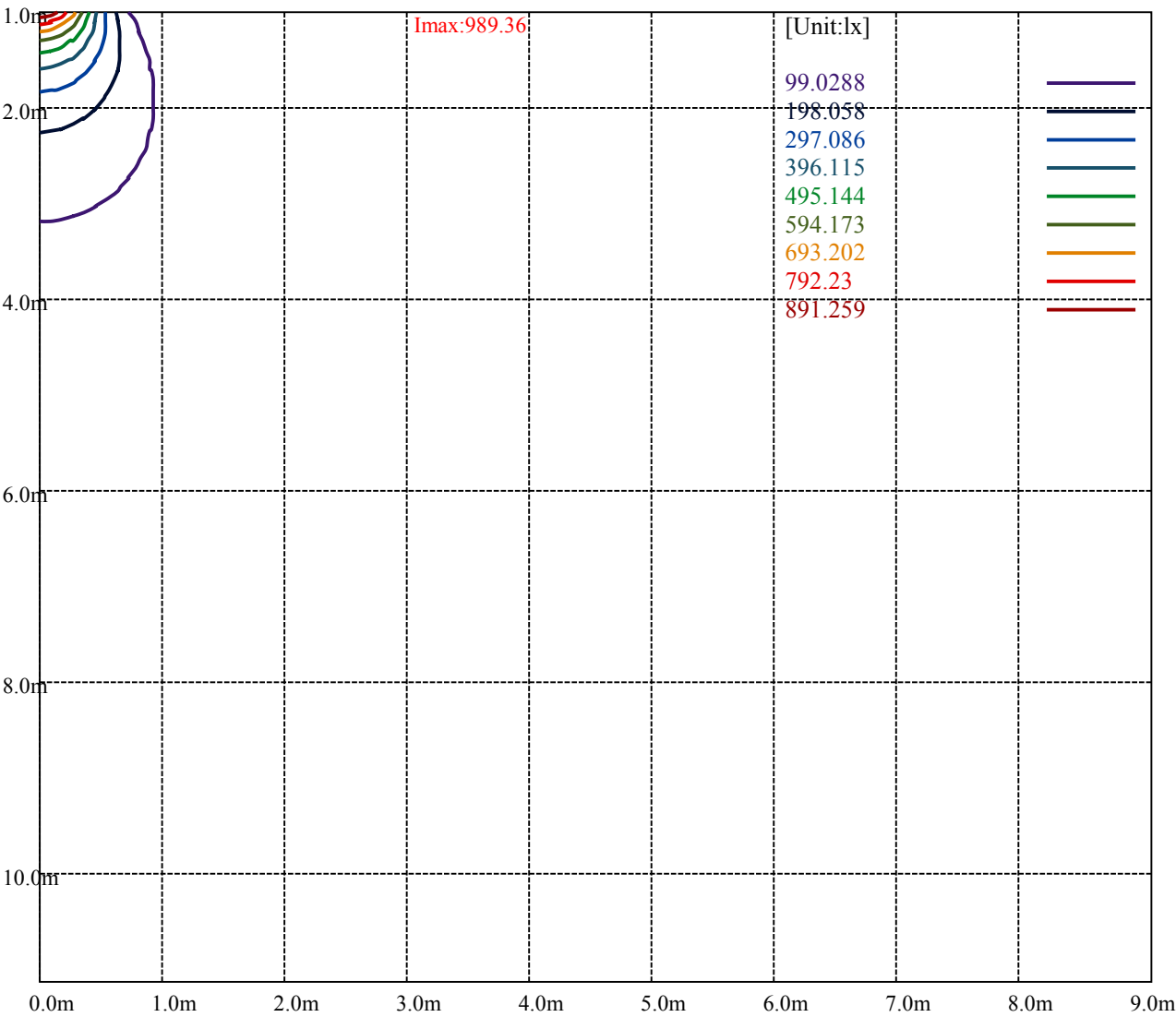
[Unit:cd]

Road

Imax:989.36	
(10%Imax) 99.0288	
(20%Imax) 198.058	
(30%Imax) 297.086	
(40%Imax) 396.115	
(50%Imax) 495.144	
(60%Imax) 594.173	
(70%Imax) 693.202	
(80%Imax) 792.23	
(90%Imax) 891.259	



(10%E _{max}) 24.54557	—
(20%E _{max}) 49.09125	—
(30%E _{max}) 73.63675	—
(40%E _{max}) 98.18225	—
(50%E _{max}) 122.7278	—
(60%E _{max}) 147.2735	—
(70%E _{max}) 171.819	—
(80%E _{max}) 196.3645	—
(90%E _{max}) 220.91	—



Luminance Limiting Curve(no luminous side)

Luminance Table

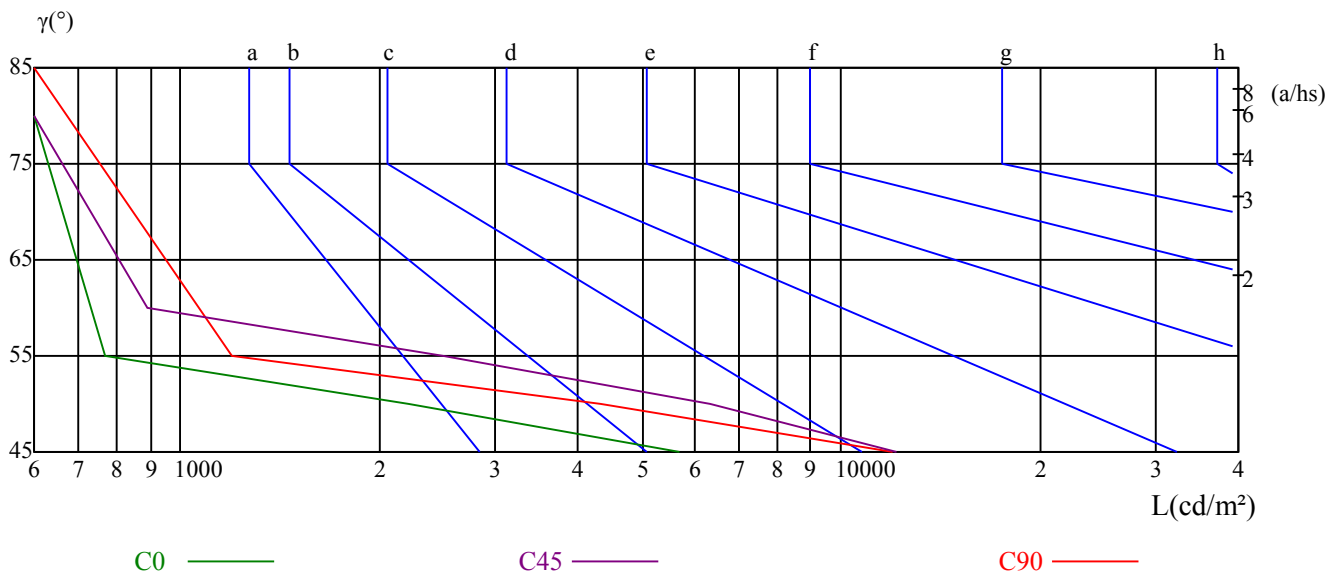
γ	45	50	55	60	65	70	75	80	85
C0	5700	2210	769	0	0	0	0	113	129
C45	12179	6348	2506	889	0	0	0	132	154
C90	11970	4334	1196	0	0	0	0	0	477

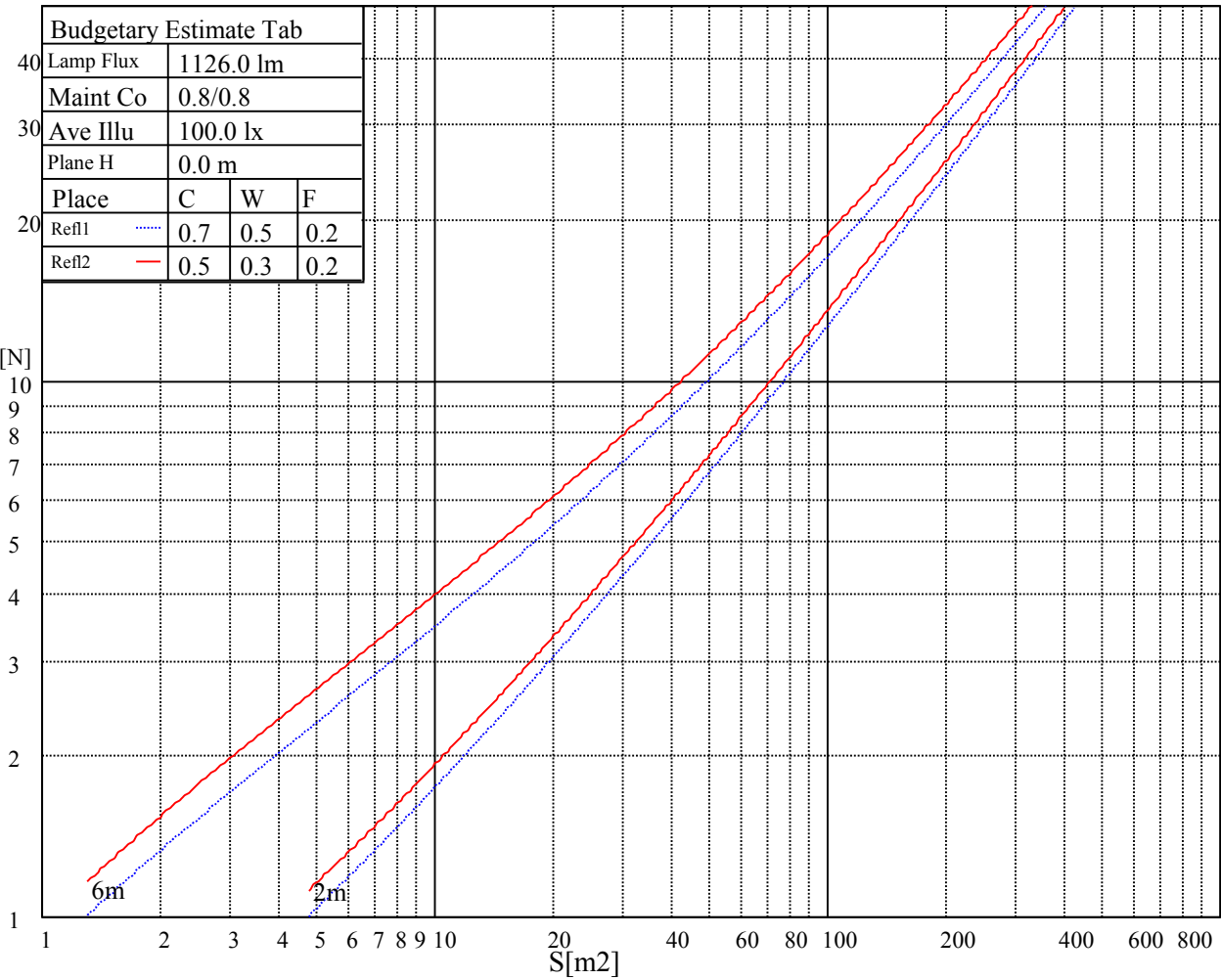
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	867	867	650

Glare Table

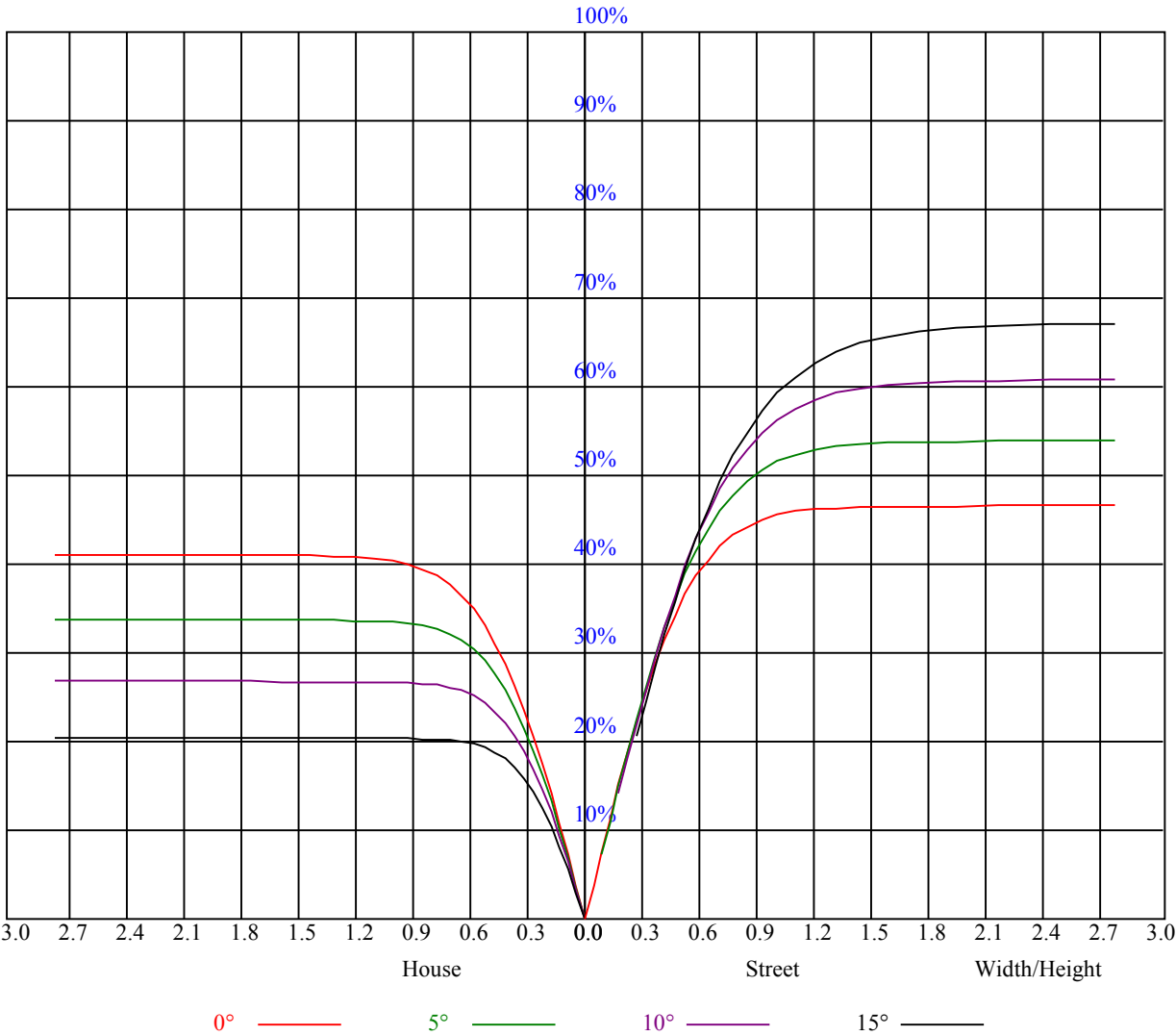
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

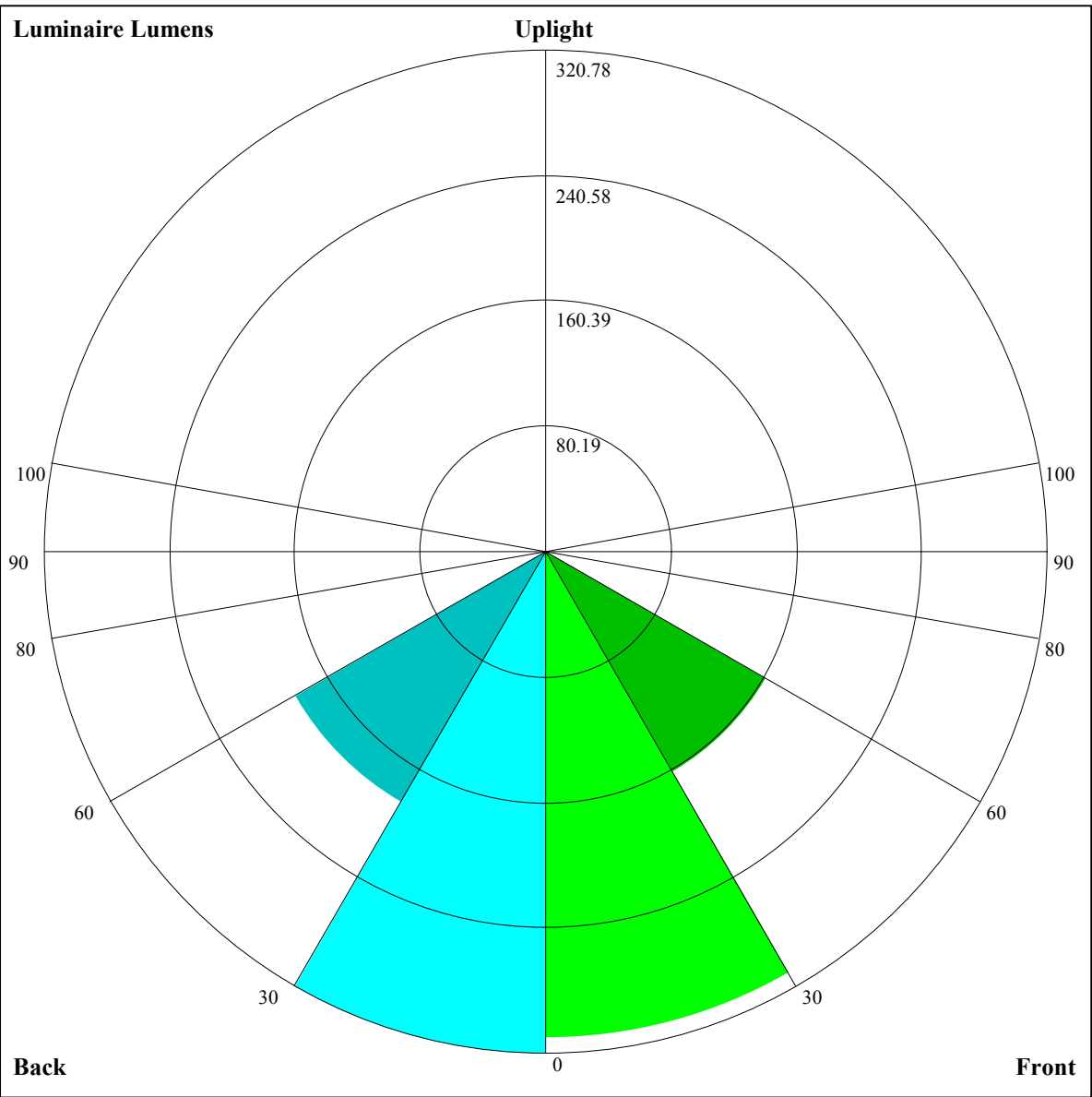
Luminance Limiting Curve





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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.95	0.93	0.95	0.93	0.91	0.92	0.90	0.89	0.88	0.87	0.86	0.85	0.84	0.83	0.82
2	0.90	0.86	0.83	0.88	0.85	0.82	0.86	0.83	0.80	0.83	0.81	0.79	0.80	0.79	0.77	0.76
3	0.83	0.79	0.75	0.82	0.78	0.75	0.80	0.76	0.73	0.78	0.75	0.72	0.76	0.73	0.71	0.70
4	0.77	0.72	0.68	0.76	0.72	0.68	0.75	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.64
5	0.72	0.67	0.63	0.71	0.66	0.62	0.70	0.65	0.62	0.68	0.64	0.61	0.67	0.63	0.61	0.59
6	0.67	0.62	0.58	0.67	0.61	0.58	0.65	0.61	0.57	0.64	0.60	0.57	0.63	0.59	0.56	0.55
7	0.63	0.57	0.53	0.62	0.57	0.53	0.61	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.52	0.51
8	0.59	0.53	0.50	0.58	0.53	0.50	0.57	0.53	0.49	0.57	0.52	0.49	0.56	0.52	0.49	0.48
9	0.55	0.50	0.46	0.55	0.50	0.46	0.54	0.49	0.46	0.53	0.49	0.46	0.53	0.49	0.46	0.44
10	0.52	0.47	0.43	0.52	0.47	0.43	0.51	0.46	0.43	0.50	0.46	0.43	0.50	0.46	0.43	0.42





Luminaire Lumens:

FL=310.61,FM=162.18,FH=1.6,FVH=0.46

BL=320.78,BM=185.21,BH=1.97,BVH=0.47

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	986.39	973.28	934.76	857.15	755.75	626.59	482.11	326.20	177.83
22.5	988.09	983.35	953.30	896.34	809.24	693.62	552.61	407.96	262.30
45.0	983.94	969.89	932.39	868.58	774.29	650.29	491.84	350.92	242.24
67.5	974.29	972.94	950.17	903.36	817.54	708.52	586.98	423.71	279.57
90.0	965.49	957.02	925.03	860.11	773.02	666.20	510.89	360.23	213.97
112.5	979.88	980.39	959.48	912.84	839.88	738.99	604.58	443.43	296.92
135.0	980.89	971.41	938.74	881.27	797.39	682.45	548.55	409.57	280.67
157.5	986.48	989.36	966.50	926.13	844.03	743.99	611.52	470.85	327.73
180.0	986.39	975.81	941.79	883.30	796.04	683.89	550.75	405.51	234.71
202.5	988.09	967.69	923.76	853.34	753.30	628.11	486.09	344.99	211.26
225.0	983.94	973.02	939.42	888.47	790.62	672.21	534.92	396.71	271.53
247.5	974.29	953.98	911.49	842.51	741.62	616.43	459.85	314.78	184.85
270.0	965.49	953.47	919.19	858.67	760.49	652.07	513.93	346.01	203.47
292.5	978.52	958.55	912.08	825.16	714.87	581.48	439.96	296.92	171.82
315.0	980.89	966.08	927.99	859.52	762.35	636.75	495.40	354.73	235.72
337.5	986.48	960.92	905.82	822.95	709.62	572.67	409.49	283.71	156.25
360.0	986.39	973.28	934.76	857.15	755.75	626.59	482.11	326.20	177.83

C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	63.99	25.82	7.70	2.62	1.44	1.10	0.93	0.85	0.85
22.5	138.72	48.41	17.44	5.59	2.03	1.27	1.02	0.85	0.85
45.0	136.10	65.68	21.92	5.92	1.61	1.18	0.93	0.85	0.85
67.5	157.85	68.47	23.95	7.36	2.03	1.35	1.10	0.93	0.85
90.0	98.27	35.21	11.34	2.96	1.61	1.18	1.02	0.85	0.85
112.5	182.82	75.92	27.00	8.21	2.54	1.44	1.10	0.93	0.85
135.0	164.71	86.59	33.09	9.40	2.37	1.27	1.02	0.93	0.93
157.5	193.49	76.94	28.19	11.26	3.05	1.44	1.10	0.93	0.85
180.0	115.45	38.09	13.71	4.40	1.78	1.27	1.02	0.85	0.85
202.5	88.36	32.50	11.60	3.64	1.52	1.10	0.93	0.85	0.85
225.0	167.25	82.78	34.53	9.99	2.20	1.27	1.02	0.93	0.85
247.5	84.39	31.49	10.16	2.96	1.52	1.10	0.93	0.85	0.85
270.0	91.24	33.52	10.75	3.30	1.61	1.27	1.02	0.85	0.85
292.5	71.18	29.03	9.31	2.45	1.44	1.10	0.93	0.85	0.85
315.0	140.25	63.56	20.74	5.76	1.61	1.18	1.02	0.85	0.85
337.5	57.47	20.65	6.77	2.29	1.35	1.10	0.93	0.85	0.85
360.0	63.99	25.82	7.70	2.62	1.44	1.10	0.93	0.85	0.85

C/ γ (°)	90.0
0.0	0.85
22.5	0.85
45.0	0.85
67.5	0.85
90.0	0.85
112.5	0.85
135.0	0.85
157.5	0.85
180.0	0.85
202.5	0.85
225.0	0.85
247.5	0.85
270.0	0.85
292.5	0.85
315.0	0.85
337.5	0.85
360.0	0.85