



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.cn
Tel:+86 750 3770000 Fax:+86 750 3771111
Address:380Jinou Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

Client:

LumCAT: 1658-S

Luminaire: 92.70.132.00

Report No: NT2017041103

Test No: nata-0100

LampCAT: LUMILEDS 1203

Lamp flux(lm): 1132.0

Number of Lamps: 1

Length(mm): 47

Phm Type: C

Voltage(V): 35.3300

Current(A): 0.3000

Power (W): 10.5660

PF: 0.0000

Ballast type: DC

Width(mm): 47

Height(mm): 0

Photometric Results

Lumens(lm): 927.08, Efficiency(%): 81.90% , Luminous Efficacy(lm/W): 87.74

Central intensity(cd): 2299.385, Maximum intensity(cd): 2299.385

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=32.6

[C90/270]Total=32.6

Field angle(10%Imax): [C0/180]Total=65.2

[C90/270]Total=65.2

Maximum s/h(1/2): C0_180=0.52 C90_270=0.52

Maximum s/h(1/4): C0_180=0.59 C90_270=0.59

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.03%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.139%

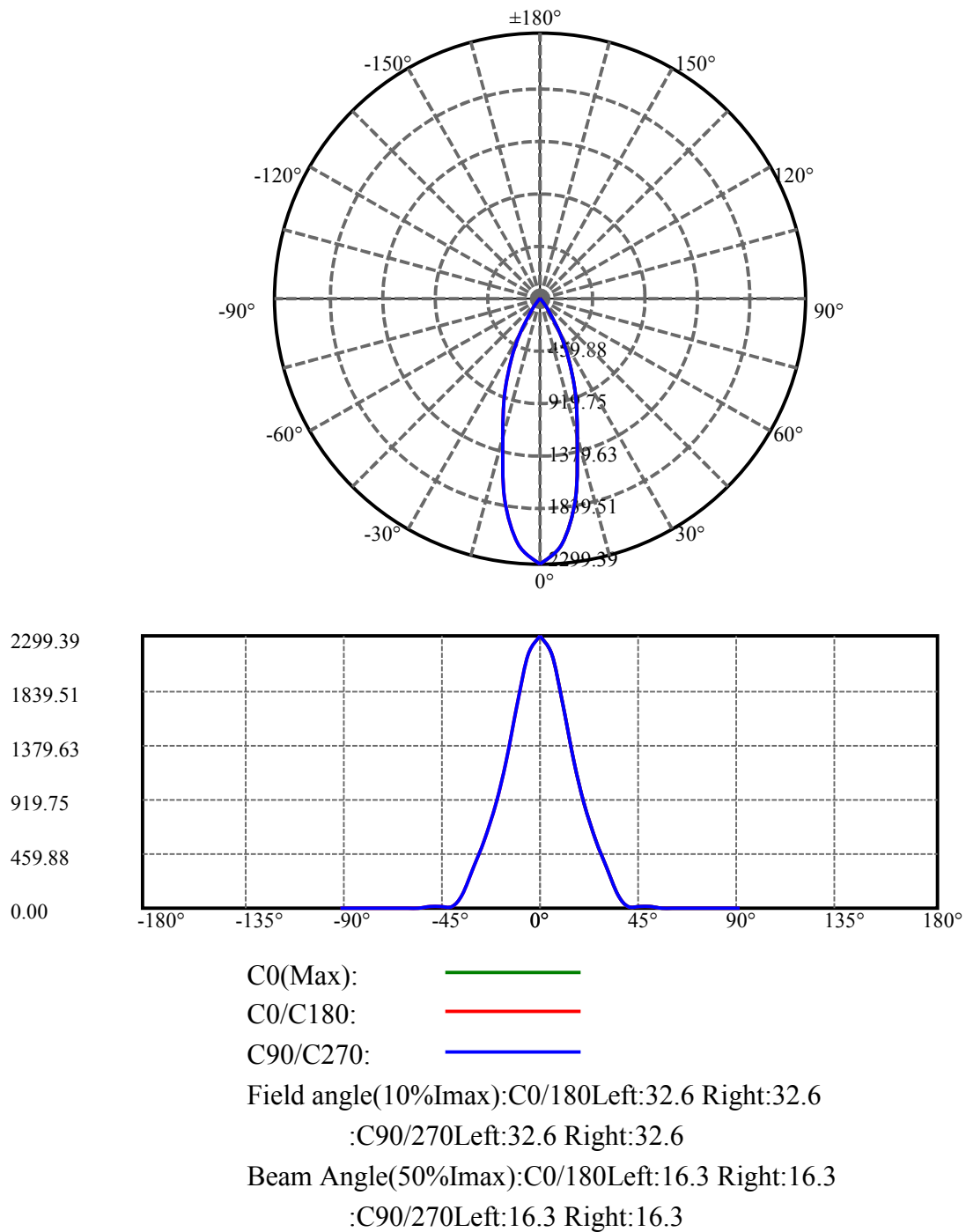
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2299.385	13.751	13.751	1.215%	1.483%
5.0	2137.300	102.106	115.857	9.020%	12.497%
10.0	1757.199	167.256	283.112	14.775%	30.538%
15.0	1238.944	175.767	458.879	15.527%	49.497%
20.0	892.199	167.264	626.143	14.776%	67.539%
25.0	575.911	133.411	759.555	11.785%	81.930%
30.0	350.216	95.983	855.538	8.479%	92.283%
35.0	120.500	37.885	893.423	3.347%	96.370%
40.0	19.130	6.740	900.163	.595%	97.097%
45.0	9.301	3.605	903.768	.318%	97.486%
50.0	7.840	3.292	907.06	.291%	97.841%
55.0	6.866	3.083	910.143	.272%	98.173%
60.0	6.143	2.916	913.059	.258%	98.488%
65.0	5.593	2.778	915.837	.245%	98.787%
70.0	5.176	2.666	918.503	.235%	99.075%
75.0	4.856	2.571	921.074	.227%	99.352%
80.0	4.661	2.516	923.59	.222%	99.624%
85.0	4.341	2.370	925.96	.209%	99.879%
90.0	4.083	1.119	927.079	.099%	100.000%

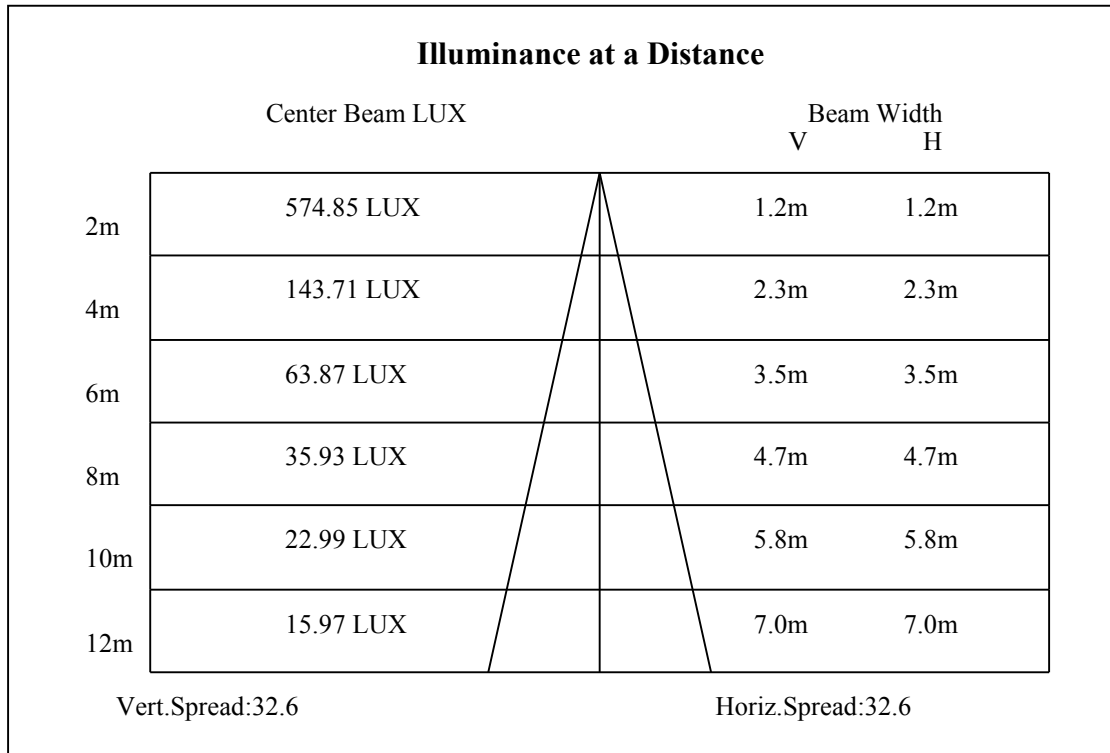
ZONAL LUMEN SUMMARY

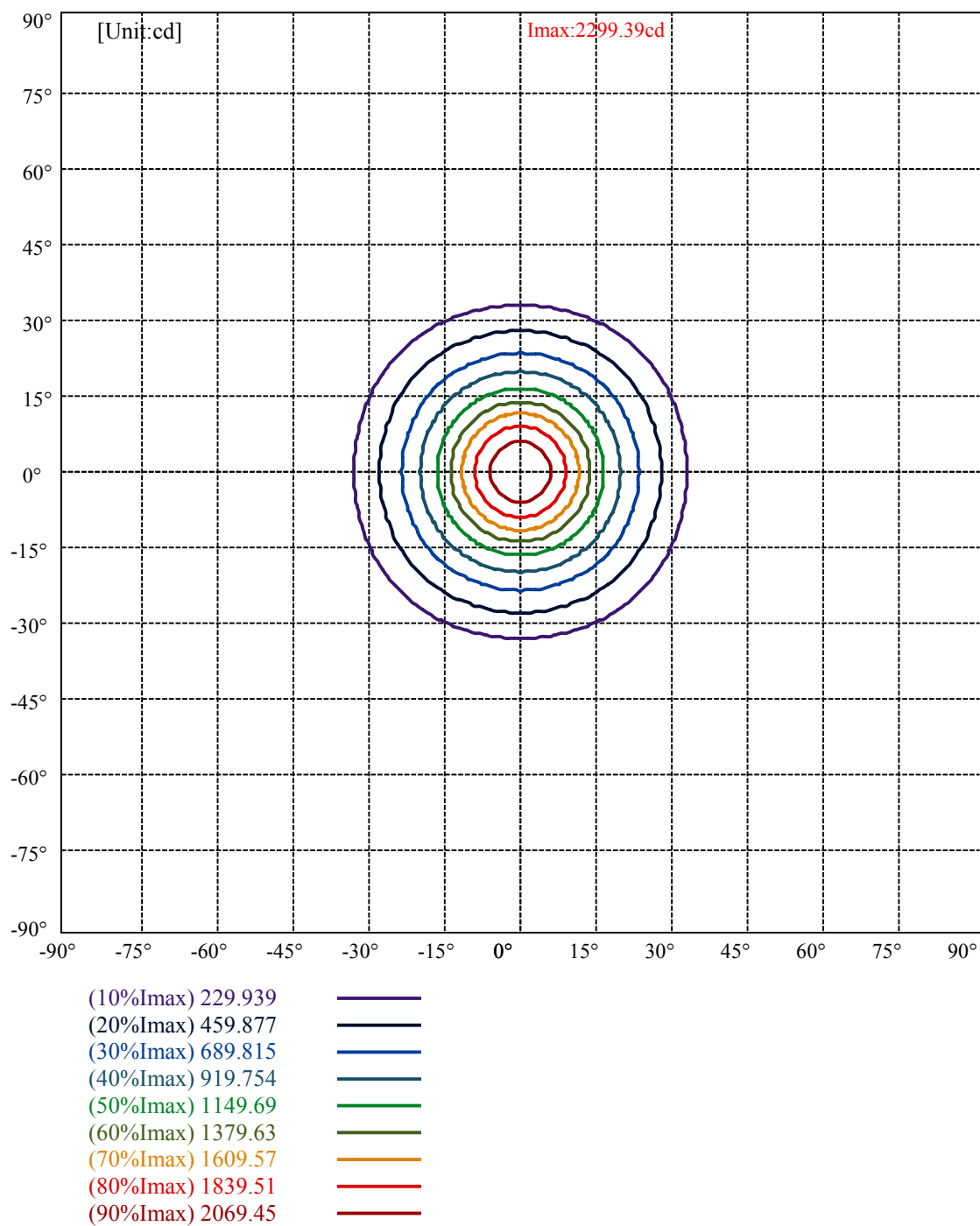
Zone	Lumens	%Lamp	%Fixt
0-30	855.54	75.58%	92.28%
0-40	900.16	79.52%	97.10%
0-60	913.06	80.66%	98.49%
0-90	925.96	81.80%	99.88%
0-120	925.96	81.80%	99.88%
0-180	927.08	81.90%	100.00%
60-90	15.82	1.40%	1.71%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-24.33	741.66	65.52%	80.00%

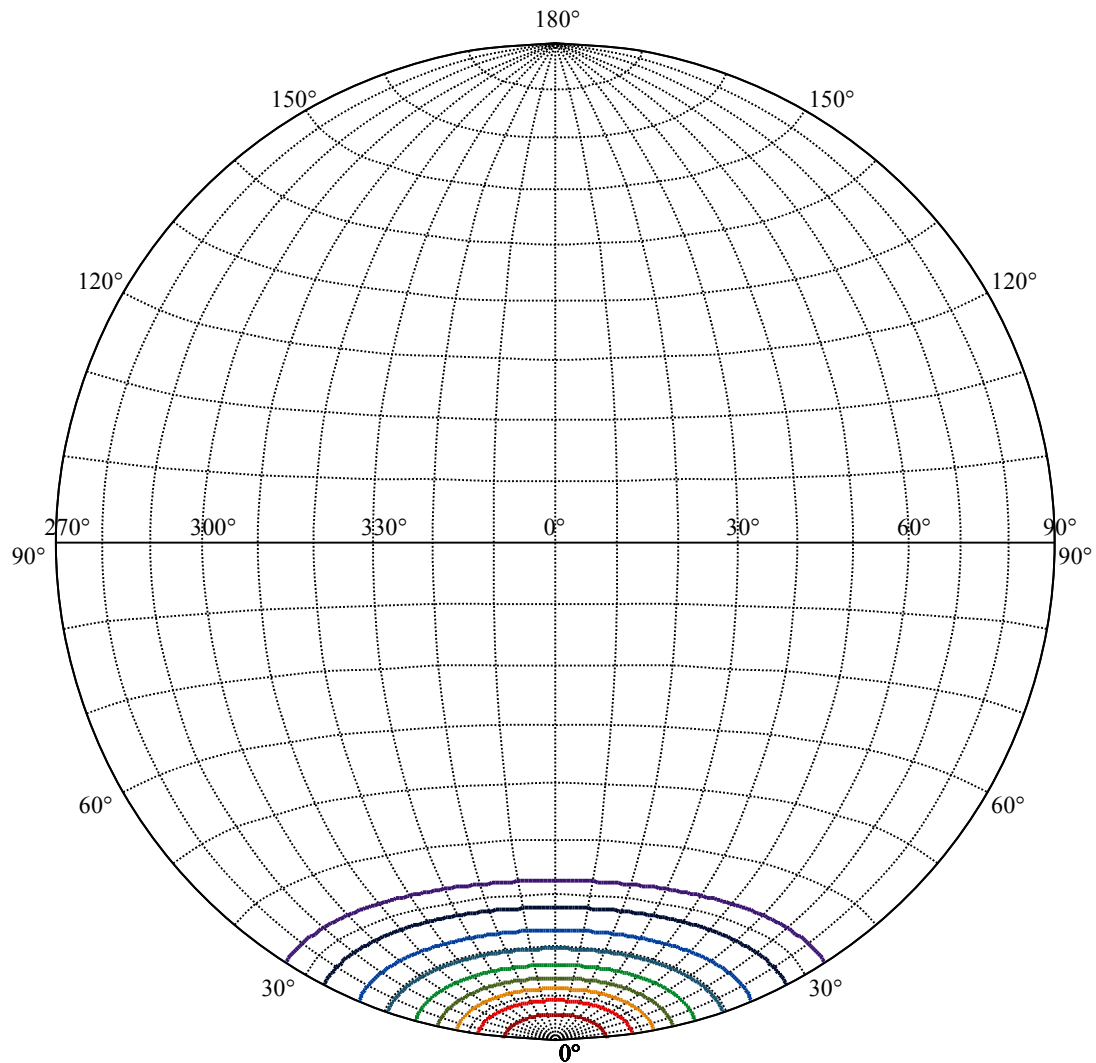
ZONAL LUMEN SUMMARY

0-10	283.11
10-20	343.03
20-30	229.39
30-40	44.63
40-50	6.90
50-60	6.00
60-70	5.44
70-80	5.09
80-90	2.37
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









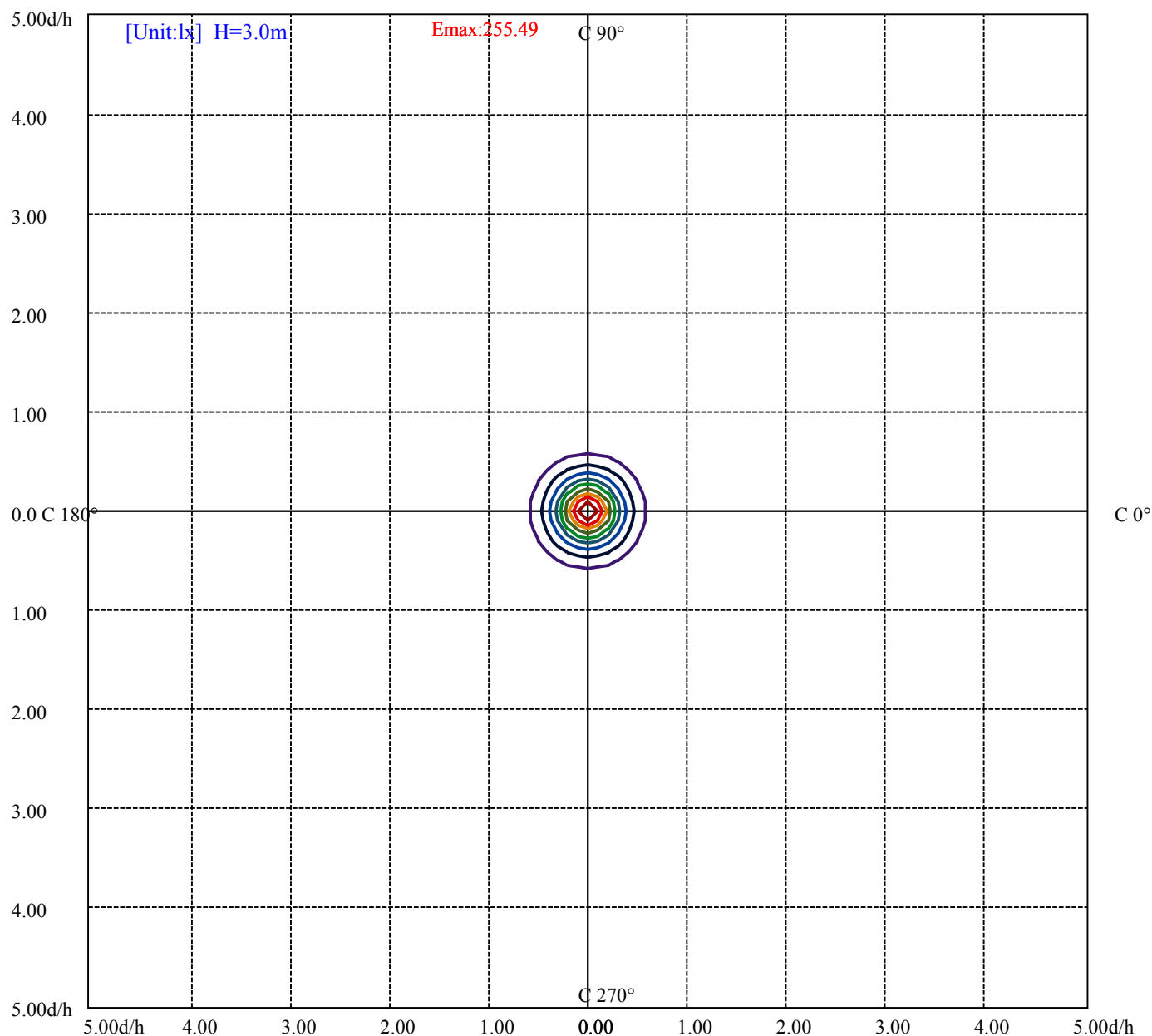
House

[Unit:cd]

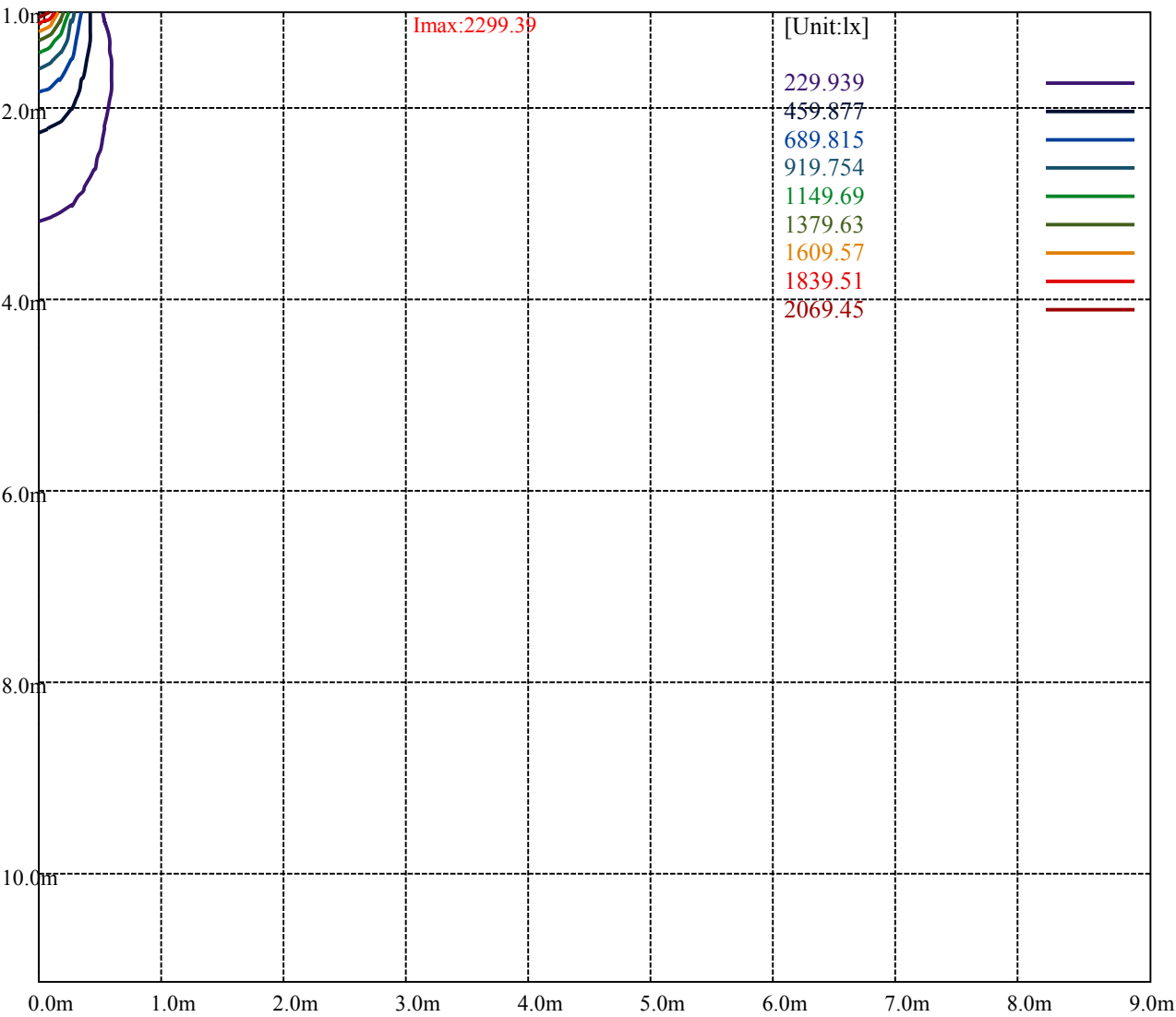
Road

Imax:2299.39

(10%Imax)	229.939	—
(20%Imax)	459.877	—
(30%Imax)	689.815	—
(40%Imax)	919.754	—
(50%Imax)	1149.69	—
(60%Imax)	1379.63	—
(70%Imax)	1609.57	—
(80%Imax)	1839.51	—
(90%Imax)	2069.45	—



(10%Emax)	25.54867	—
(20%Emax)	51.09734	—
(30%Emax)	76.646	—
(40%Emax)	102.1947	—
(50%Emax)	127.7433	—
(60%Emax)	153.2922	—
(70%Emax)	178.8411	—
(80%Emax)	204.3889	—
(90%Emax)	229.9378	—



Luminance Table

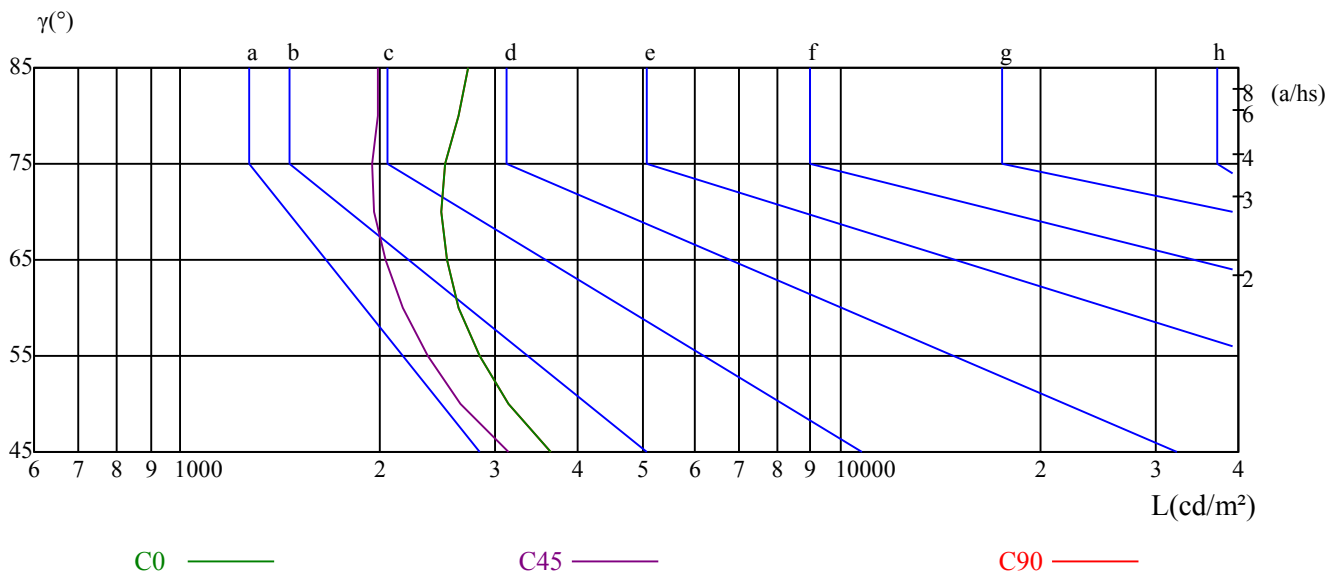
γ	45	50	55	60	65	70	75	80	85
C0	3635	3136	2835	2641	2529	2488	2511	2630	2718
C45	3129	2660	2367	2169	2041	1968	1944	1986	1992
C90	3635	3136	2835	2641	2529	2488	2511	2630	2718

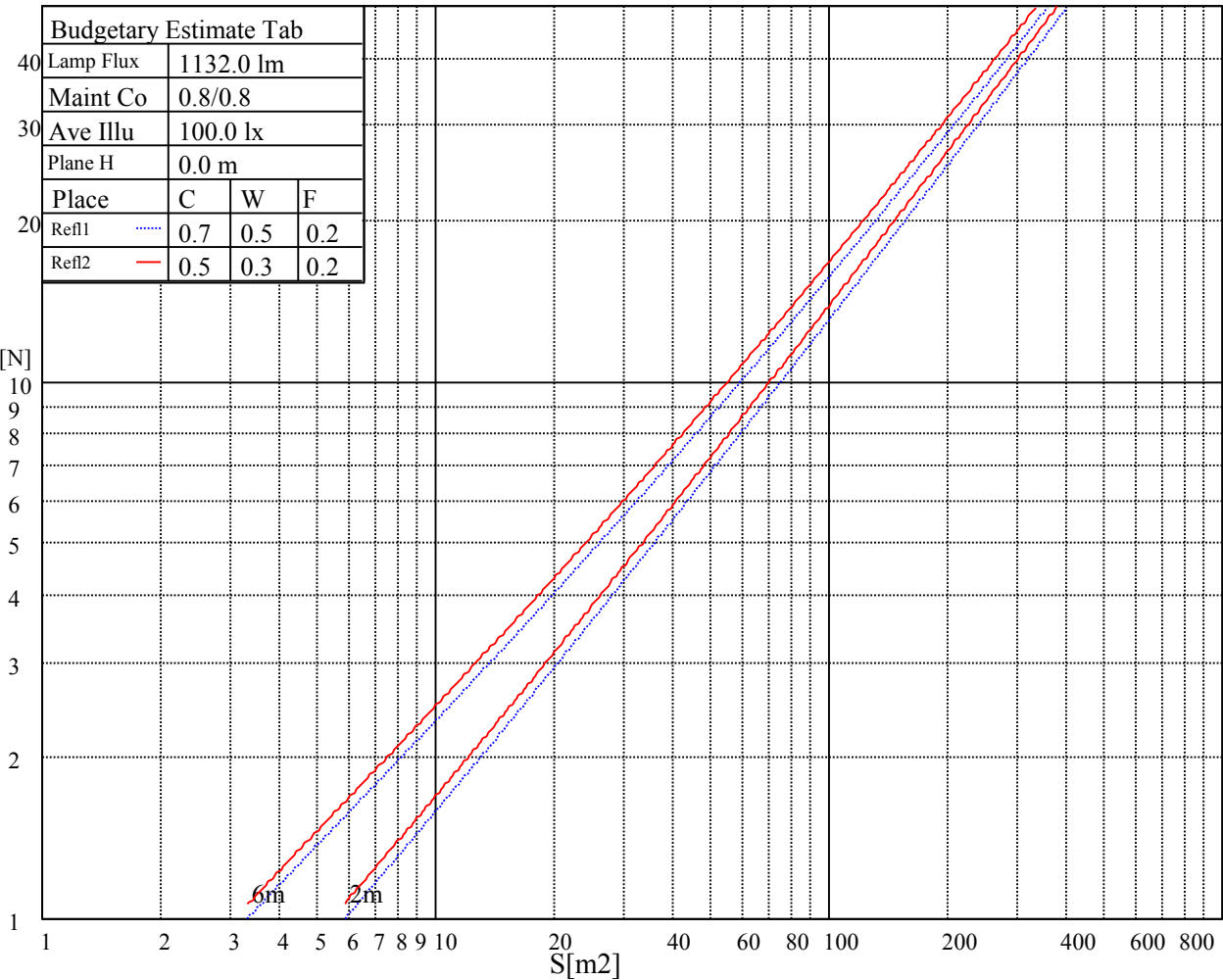
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5991	5991	5991	8493	8493	8493	22547	22547	22547

Glare Table

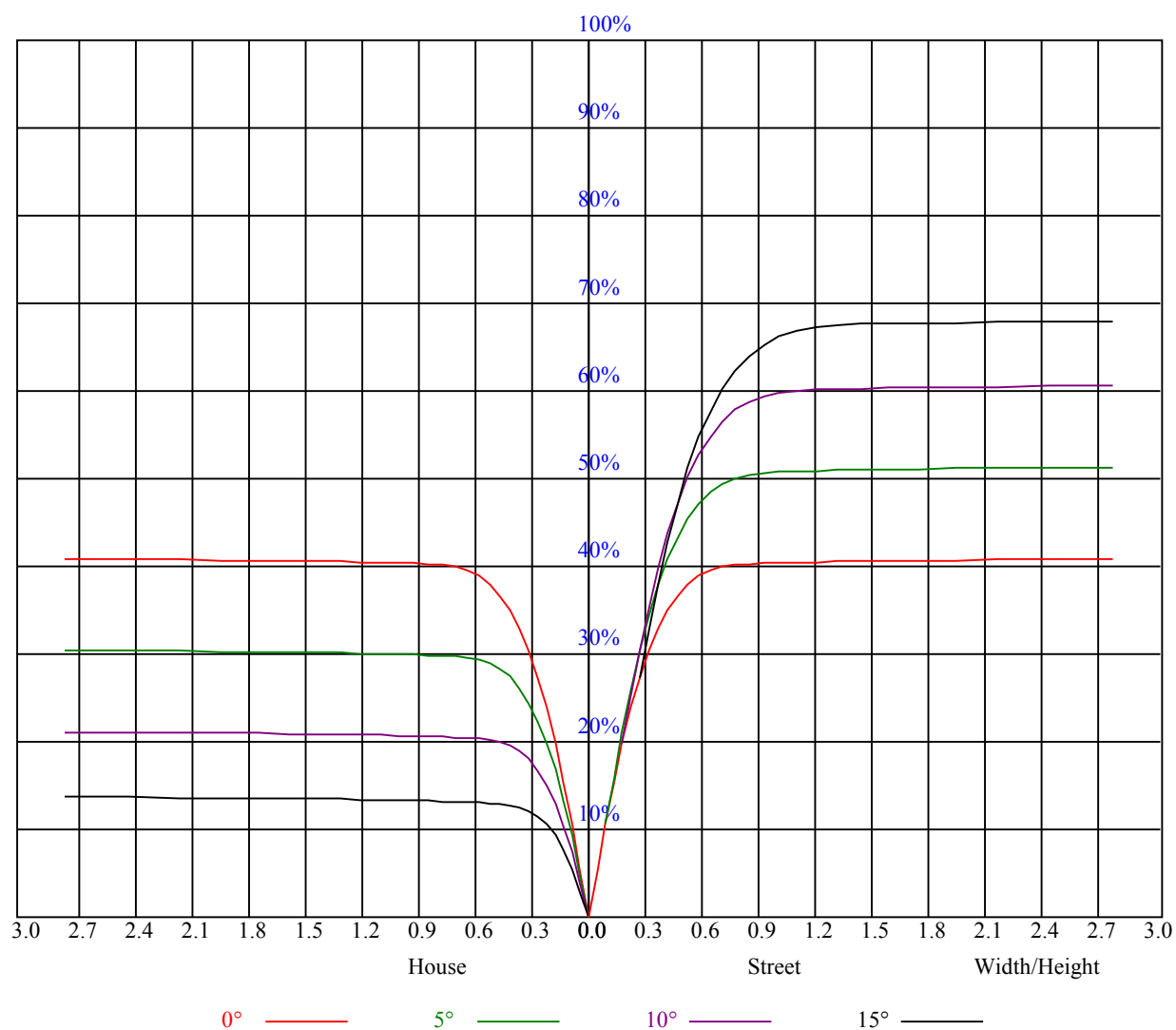
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

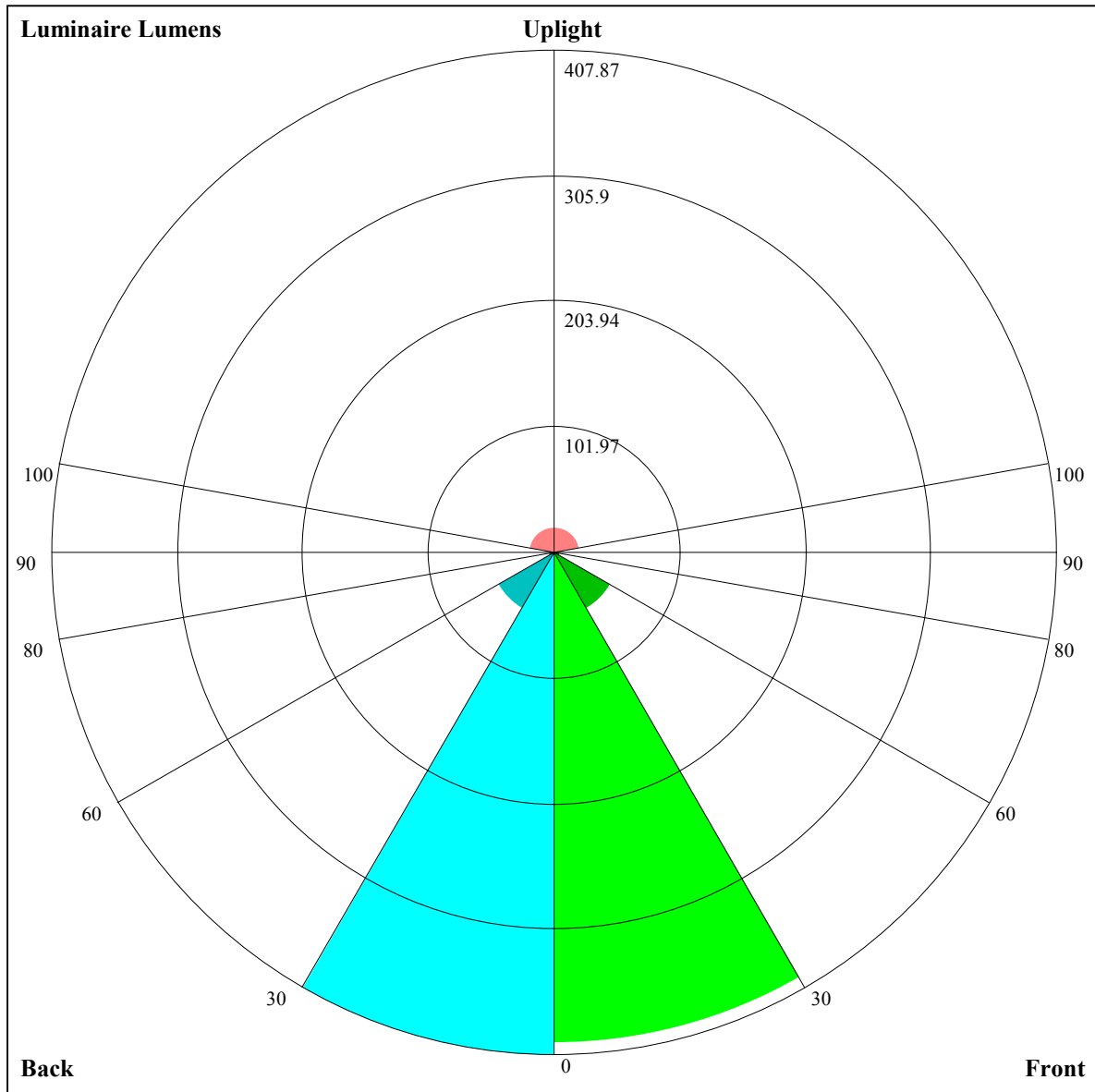
Luminance Limiting Curve





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





Luminaire Lumens:

FL=397.8,FM=52.62,FH=5.42,FVH=2.37

BL=407.87,BM=53.1,BH=5.5,BVH=2.39

UL=4.46,UH=21.2

BUG Rating:B1-U2-G0

Nata 1658-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	2301.75	2147.60	1785.86	1303.36	890.98	583.23	365.07	134.12	19.59		
45.0	2295.07	2154.83	1778.63	1298.35	908.79	592.69	371.75	138.80	19.31		
90.0	2302.31	2135.35	1730.21	1089.44	876.40	550.17	316.38	107.24	19.70		
135.0	2298.41	2207.14	1857.65	1387.95	977.24	652.79	411.27	146.98	22.04		
180.0	2301.75	2114.76	1740.23	1226.56	888.98	571.88	346.26	105.35	16.47		
225.0	2295.07	2118.10	1749.13	1210.98	903.67	577.89	338.36	112.19	17.81		
270.0	2302.31	2145.37	1786.97	1298.35	898.77	564.86	337.25	124.33	21.20		
315.0	2298.41	2075.25	1628.92	1096.56	792.76	513.78	315.38	95.00	16.92		
360.0	2301.75	2147.60	1785.86	1303.36	890.98	583.23	365.07	134.12	19.59		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	9.13	7.74	6.57	5.84	5.29	5.01	4.62	4.45	4.29		
45.0	9.07	7.62	6.68	5.95	5.51	5.06	4.79	4.51	4.40		
90.0	10.30	8.96	8.01	7.07	6.12	5.51	5.12	4.79	4.29		
135.0	8.90	7.57	6.73	6.23	5.79	5.40	4.95	4.90	4.45		
180.0	8.63	7.29	6.34	5.73	5.34	4.95	4.73	4.51	4.40		
225.0	8.68	7.35	6.34	5.73	5.29	5.01	4.73	4.67	4.29		
270.0	10.80	8.85	7.90	6.90	6.07	5.57	5.23	4.95	4.40		
315.0	8.90	7.35	6.34	5.68	5.34	4.90	4.67	4.51	4.23		
360.0	9.13	7.74	6.57	5.84	5.29	5.01	4.62	4.45	4.29		
C/γ(°)	90.0										
0.0	4.17										
45.0	4.17										
90.0	4.12										
135.0	4.01										
180.0	4.01										
225.0	4.12										
270.0	4.01										
315.0	4.06										
360.0	4.17										