



NATA LIGHTING CO.,LTD.
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Nata

Client: NT

LumCAT: 1-1899-A

Luminaire: 92.70.481.00

Report No: 20260330-B014

Ballast type: DC

Test No: 20260330-C014

Voltage(V): 35.180

LampCAT: CITIZEN CLU028

Current(A): 0.363

Lamp flux(lm): 1607.0

Power (W): 12.770

Number of Lamps: 1

PF: 0.000

Length(mm): 50

Width(mm): 50

Phm Type: C

Height(mm): 19

Photometric Results

Lumens(lm): 1468.33, Efficiency(%): 91.37% , Luminous Efficacy(lm/W): 114.98

Central intensity(cd): 4853.813, Maximum intensity(cd): 4853.813

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=22.0

[C90/270]Total=22.0

Field angle(10%Imax): [C0/180]Total=70.4

[C90/270]Total=70.4

Maximum s/h(1/2): C0_180=0.38 C90_270=0.38

Maximum s/h(1/4): C0_180=0.40 C90_270=0.40

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 91.37%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.325%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2026/3/30
Humidity(%): 60.0%

Operator: 杨泽全
Distance(m): 9.16

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4853.813	0.000	0	0.00%	0.00%
1.0	4823.502	4.630	4.63	0.29%	0.32%
2.0	4749.036	13.739	18.37	0.85%	1.25%
3.0	4613.004	22.391	40.761	1.39%	2.78%
4.0	4438.271	30.298	71.058	1.89%	4.84%
5.0	4194.315	37.137	108.195	2.31%	7.37%
6.0	3943.018	42.764	150.959	2.66%	10.28%
7.0	3666.444	47.232	198.191	2.94%	13.50%
8.0	3366.586	50.334	248.525	3.13%	16.93%
9.0	3073.651	52.195	300.719	3.25%	20.48%
10.0	2779.876	52.972	353.692	3.30%	24.09%
11.0	2418.684	51.944	405.636	3.23%	27.63%
12.0	2137.852	49.809	455.446	3.10%	31.02%
13.0	1871.871	47.585	503.031	2.96%	34.26%
14.0	1703.347	45.762	548.793	2.85%	37.38%
15.0	1492.827	43.878	592.672	2.73%	40.36%
16.0	1300.820	40.935	633.607	2.55%	43.15%
17.0	1141.095	38.027	671.634	2.37%	45.74%
18.0	1004.455	35.375	707.009	2.20%	48.15%
19.0	895.094	33.048	740.057	2.06%	50.40%
20.0	810.109	31.210	771.267	1.94%	52.53%
21.0	744.620	29.854	801.121	1.86%	54.56%
22.0	693.952	28.909	830.03	1.80%	56.53%
23.0	655.387	28.313	858.343	1.76%	58.46%
24.0	625.632	28.008	886.35	1.74%	60.36%
25.0	603.449	27.947	914.297	1.74%	62.27%
26.0	586.165	28.081	942.378	1.75%	64.18%
27.0	571.303	28.318	970.696	1.76%	66.11%
28.0	560.280	28.649	999.345	1.78%	68.06%
29.0	549.676	29.040	1028.385	1.81%	70.04%
30.0	541.894	29.472	1057.857	1.83%	72.04%
31.0	532.801	29.907	1087.764	1.86%	74.08%
32.0	524.892	30.302	1118.066	1.89%	76.15%
33.0	514.320	30.616	1148.681	1.91%	78.23%
34.0	503.203	30.793	1179.474	1.92%	80.33%
35.0	488.047	30.785	1210.259	1.92%	82.42%
36.0	470.417	30.518	1240.777	1.90%	84.50%
37.0	447.511	29.938	1270.714	1.86%	86.54%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	417.902	28.886	1299.601	1.80%	88.51%
39.0	377.292	27.142	1326.743	1.69%	90.36%
40.0	346.803	25.254	1351.997	1.57%	92.08%
41.0	295.977	22.889	1374.886	1.42%	93.64%
42.0	236.005	19.328	1394.214	1.20%	94.95%
43.0	188.431	15.722	1409.936	0.98%	96.02%
44.0	143.898	12.543	1422.479	0.78%	96.88%
45.0	101.736	9.440	1431.919	0.59%	97.52%
46.0	67.974	6.637	1438.556	0.41%	97.97%
47.0	44.449	4.471	1443.027	0.28%	98.28%
48.0	29.566	2.992	1446.019	0.19%	98.48%
49.0	22.413	2.135	1448.154	0.13%	98.63%
50.0	18.533	1.707	1449.861	0.11%	98.74%
51.0	15.837	1.454	1451.315	0.09%	98.84%
52.0	13.435	1.256	1452.571	0.08%	98.93%
53.0	11.401	1.080	1453.652	0.07%	99.00%
54.0	9.649	0.928	1454.579	0.06%	99.06%
55.0	8.422	0.807	1455.386	0.05%	99.12%
56.0	7.562	0.722	1456.108	0.04%	99.17%
57.0	6.712	0.653	1456.761	0.04%	99.21%
58.0	6.136	0.594	1457.355	0.04%	99.25%
59.0	5.622	0.550	1457.905	0.03%	99.29%
60.0	5.181	0.510	1458.415	0.03%	99.32%
61.0	4.804	0.476	1458.892	0.03%	99.36%
62.0	4.510	0.449	1459.341	0.03%	99.39%
63.0	4.258	0.426	1459.767	0.03%	99.42%
64.0	3.996	0.405	1460.172	0.03%	99.44%
65.0	3.828	0.387	1460.559	0.02%	99.47%
66.0	3.702	0.376	1460.935	0.02%	99.50%
67.0	3.576	0.366	1461.301	0.02%	99.52%
68.0	3.472	0.357	1461.658	0.02%	99.55%
69.0	3.419	0.352	1462.009	0.02%	99.57%
70.0	3.367	0.349	1462.358	0.02%	99.59%
71.0	3.304	0.345	1462.703	0.02%	99.62%
72.0	3.241	0.340	1463.043	0.02%	99.64%
73.0	3.178	0.336	1463.379	0.02%	99.66%
74.0	3.146	0.332	1463.711	0.02%	99.69%
75.0	3.105	0.330	1464.041	0.02%	99.71%

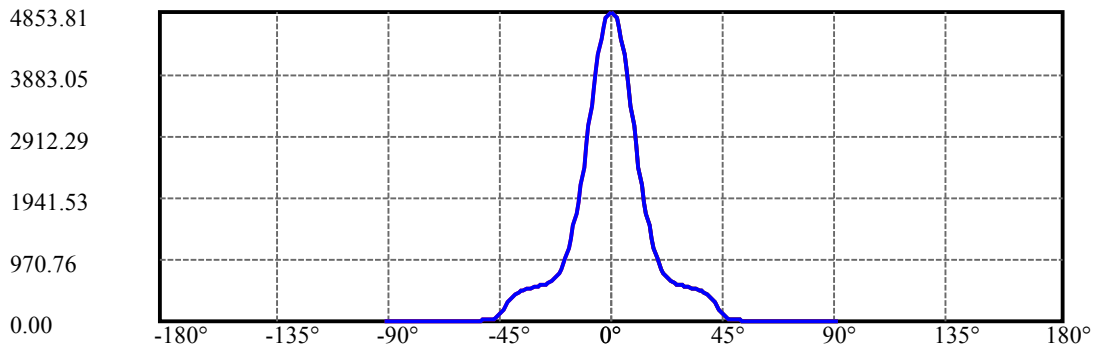
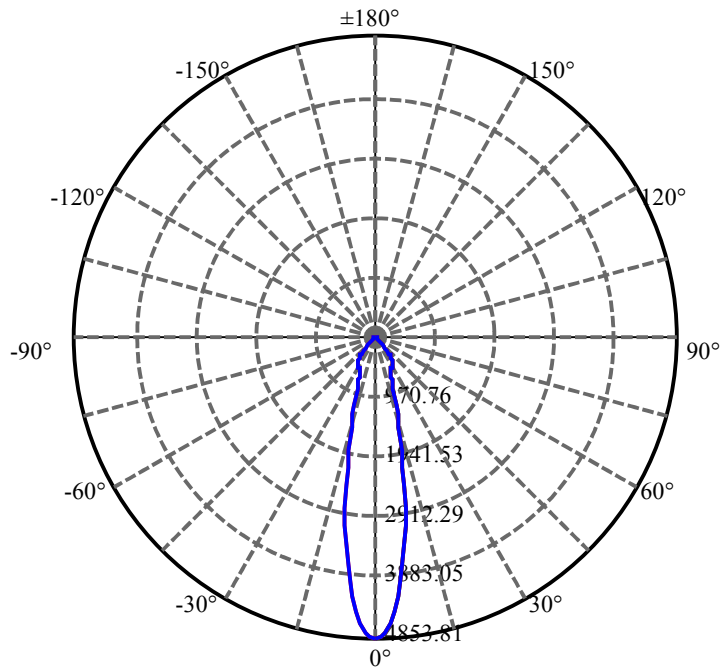
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	3.031	0.326	1464.367	0.02%	99.73%
77.0	2.979	0.320	1464.688	0.02%	99.75%
78.0	2.937	0.317	1465.004	0.02%	99.77%
79.0	2.853	0.311	1465.315	0.02%	99.79%
80.0	2.811	0.305	1465.621	0.02%	99.82%
81.0	2.748	0.301	1465.921	0.02%	99.84%
82.0	2.706	0.296	1466.217	0.02%	99.86%
83.0	2.643	0.291	1466.508	0.02%	99.88%
84.0	2.570	0.284	1466.792	0.02%	99.90%
85.0	2.465	0.275	1467.067	0.02%	99.91%
86.0	2.391	0.265	1467.332	0.02%	99.93%
87.0	2.360	0.260	1467.592	0.02%	99.95%
88.0	2.276	0.254	1467.846	0.02%	99.97%
89.0	2.223	0.247	1468.093	0.02%	99.98%
90.0	2.140	0.239	1468.332	0.01%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1057.86	65.83%	72.04%
0-40	1352.00	84.13%	92.08%
0-60	1458.42	90.75%	99.32%
0-90	1468.09	91.36%	99.98%
0-120	1468.09	91.36%	99.98%
0-180	1468.33	91.37%	100.00%
60-90	9.68	0.60%	0.66%
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%
0-33.84	1174.67	73.10%	80.00%

ZONAL LUMEN SUMMARY

0-10	353.69
10-20	417.58
20-30	286.59
30-40	294.14
40-50	97.86
50-60	8.55
60-70	3.94
70-80	3.26
80-90	2.47
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



C0(Max): —————

C0/C180: —————

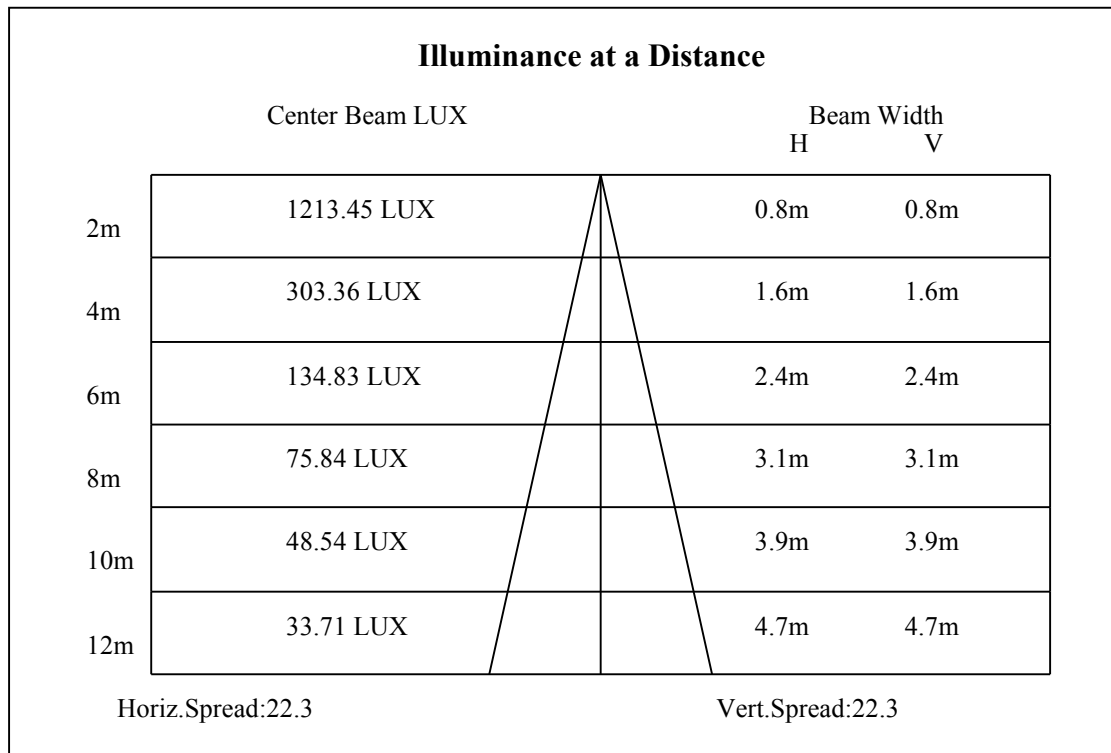
C90/C270: —————

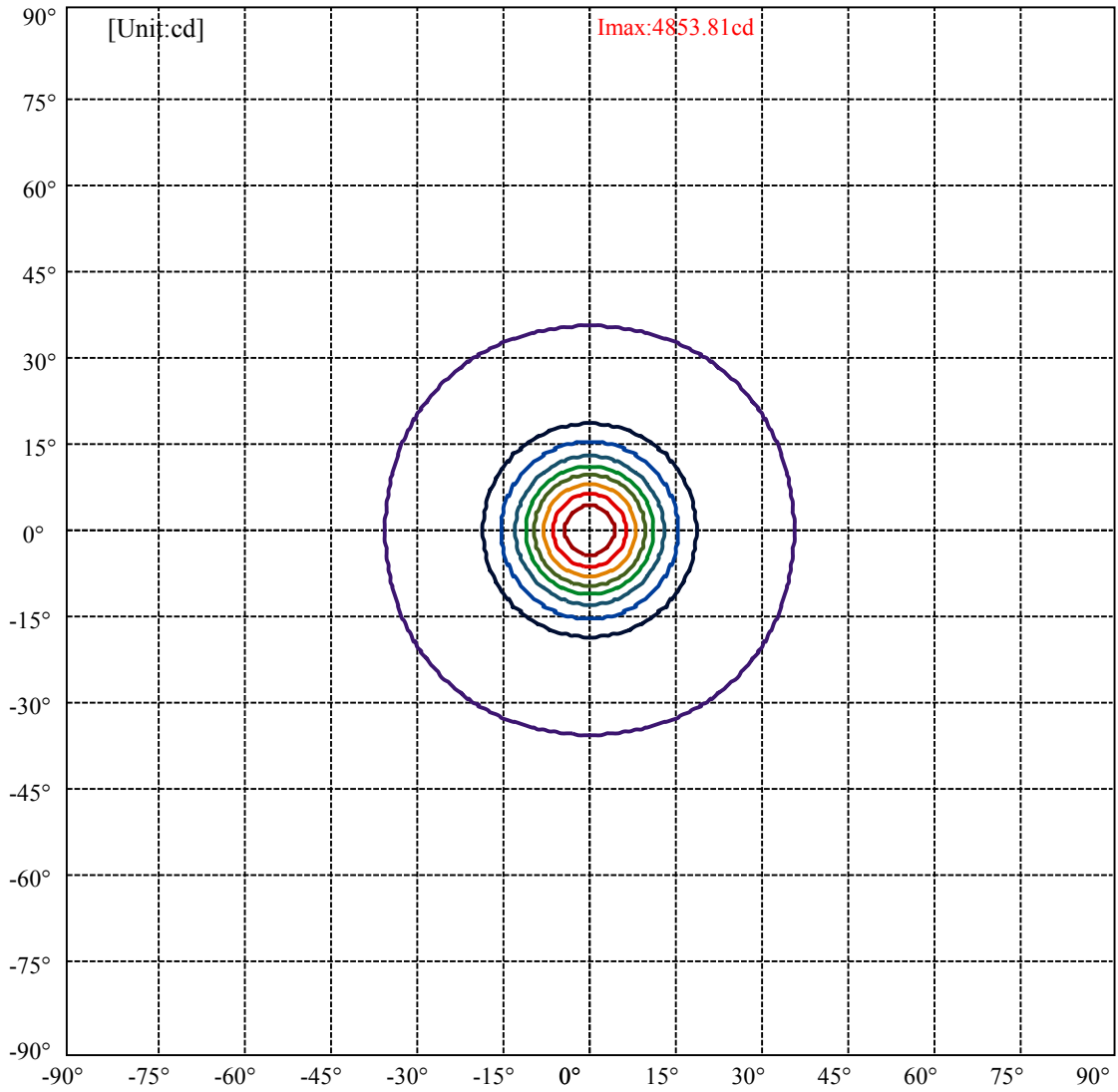
Field angle(10%Imax):C0/180Left:35.2 Right:35.2

:C90/270Left:35.2 Right:35.2

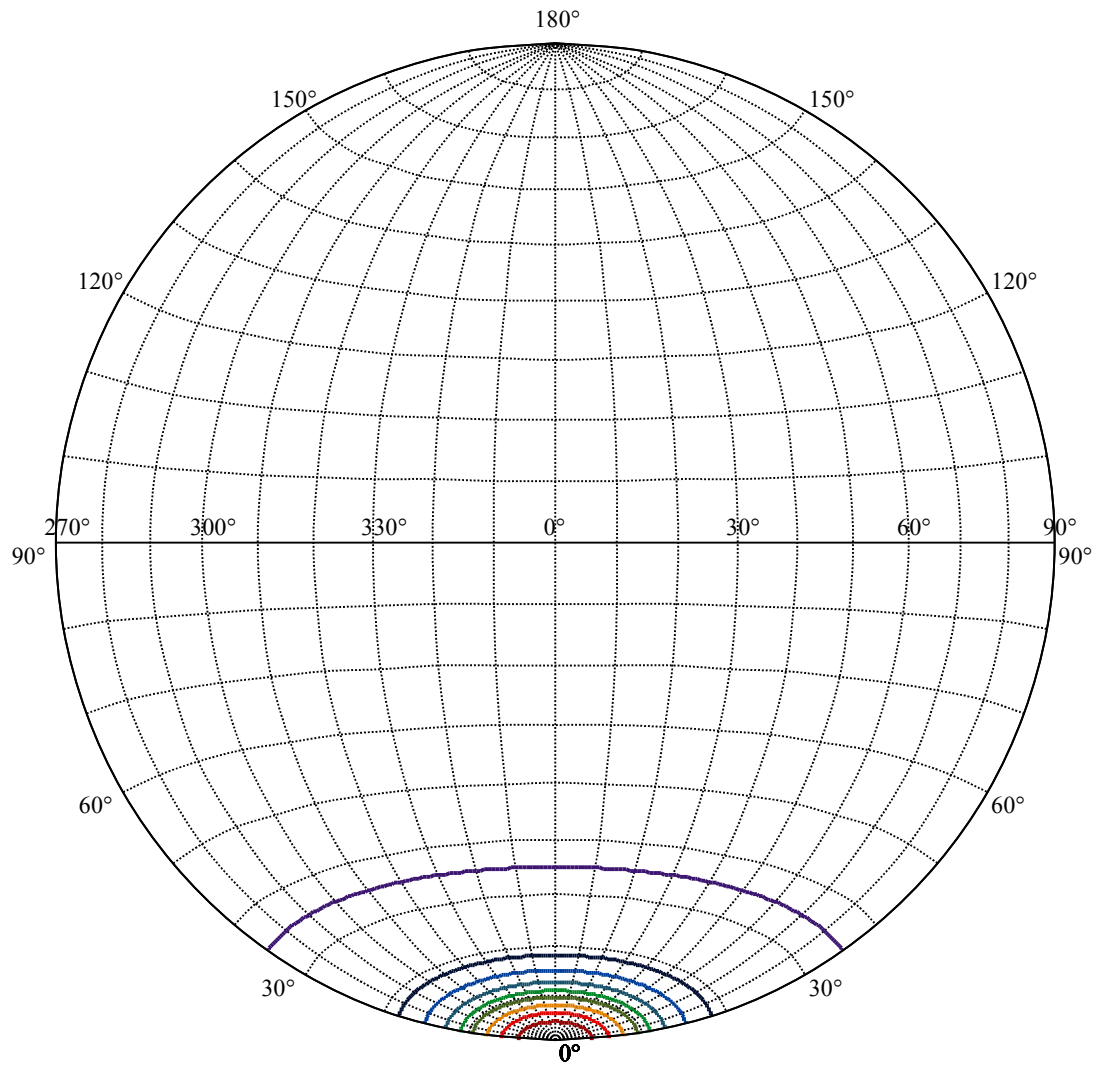
Beam Angle(50%Imax):C0/180Left:11.0 Right:11.0

:C90/270Left:11.0 Right:11.0





(10%I _{max}) 485.381	—
(20%I _{max}) 970.763	—
(30%I _{max}) 1456.14	—
(40%I _{max}) 1941.53	—
(50%I _{max}) 2426.91	—
(60%I _{max}) 2912.29	—
(70%I _{max}) 3397.67	—
(80%I _{max}) 3883.05	—
(90%I _{max}) 4368.43	—



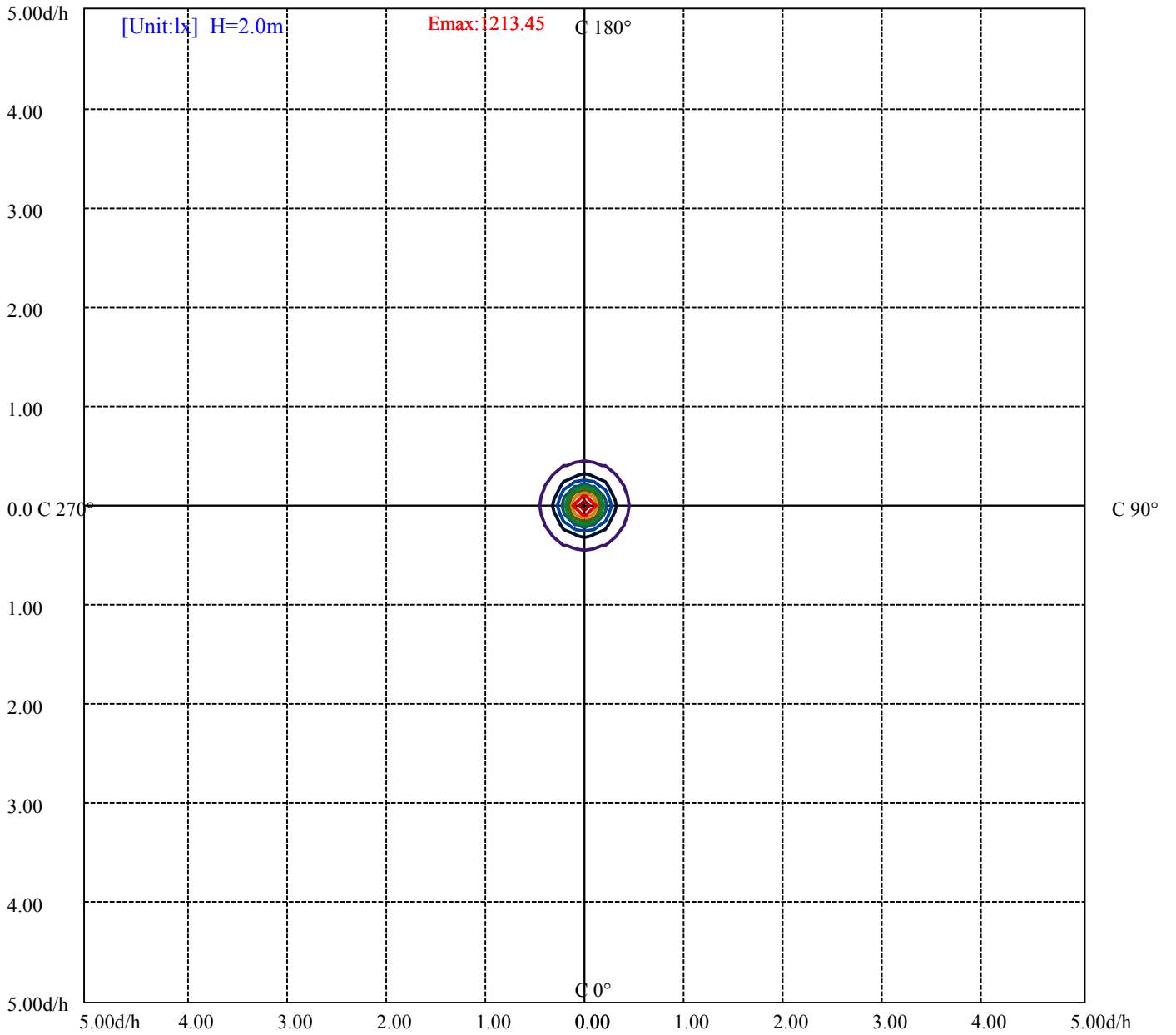
House

[Unit:cd]

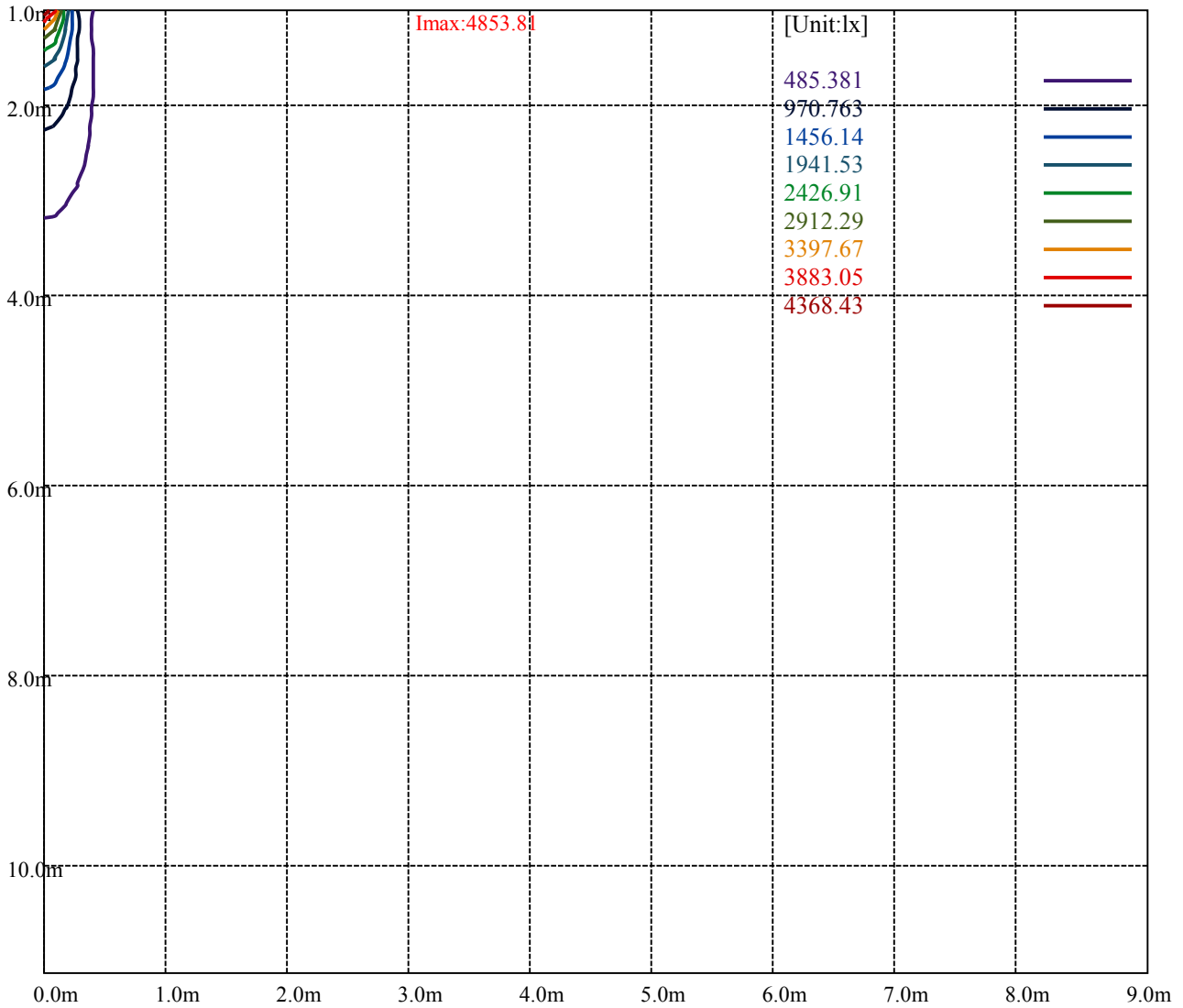
Road

Imax:4853.81

(10%Imax)	485.381	—
(20%Imax)	970.763	—
(30%Imax)	1456.14	—
(40%Imax)	1941.53	—
(50%Imax)	2426.91	—
(60%Imax)	2912.29	—
(70%Imax)	3397.67	—
(80%Imax)	3883.05	—
(90%Imax)	4368.43	—



- (10%Emax) 121.3453
- (20%Emax) 242.6905
- (30%Emax) 364.035
- (40%Emax) 485.38
- (50%Emax) 606.725
- (60%Emax) 728.07
- (70%Emax) 849.4175
- (80%Emax) 970.7625
- (90%Emax) 1092.108



Luminance Table

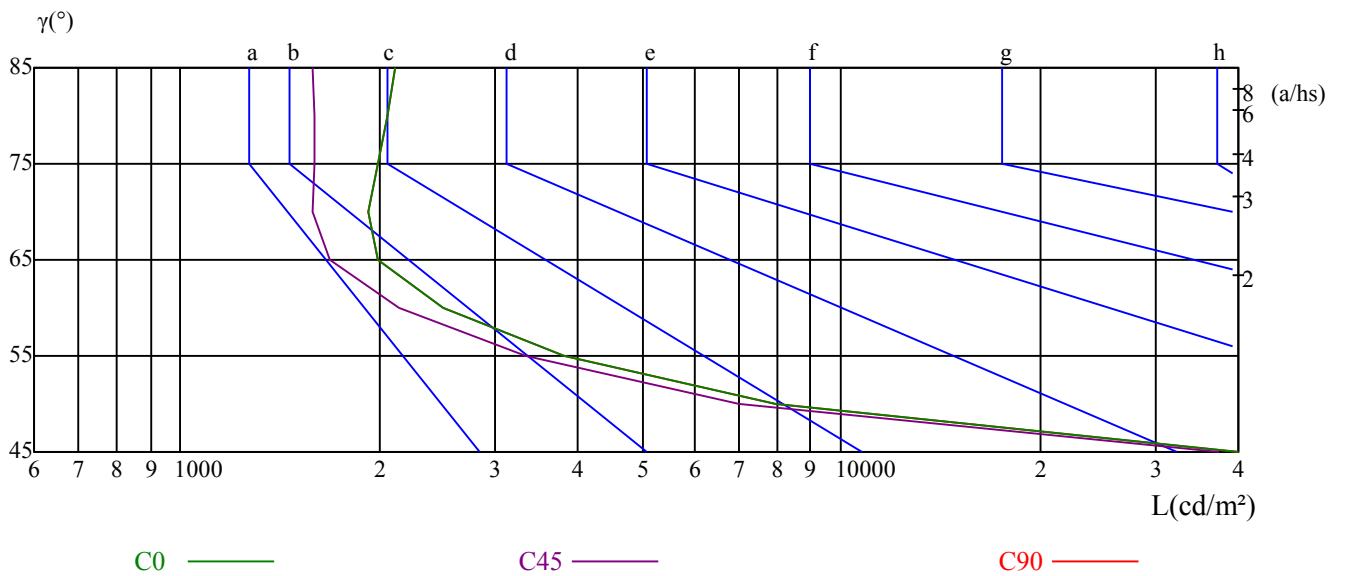
γ	45	50	55	60	65	70	75	80	85
C0	41703	7938	3807	2500	1996	1926	1984	2052	2117
C45	37434	7030	3323	2147	1683	1590	1596	1600	1584
C90	41703	7938	3807	2500	1996	1926	1984	2052	2117

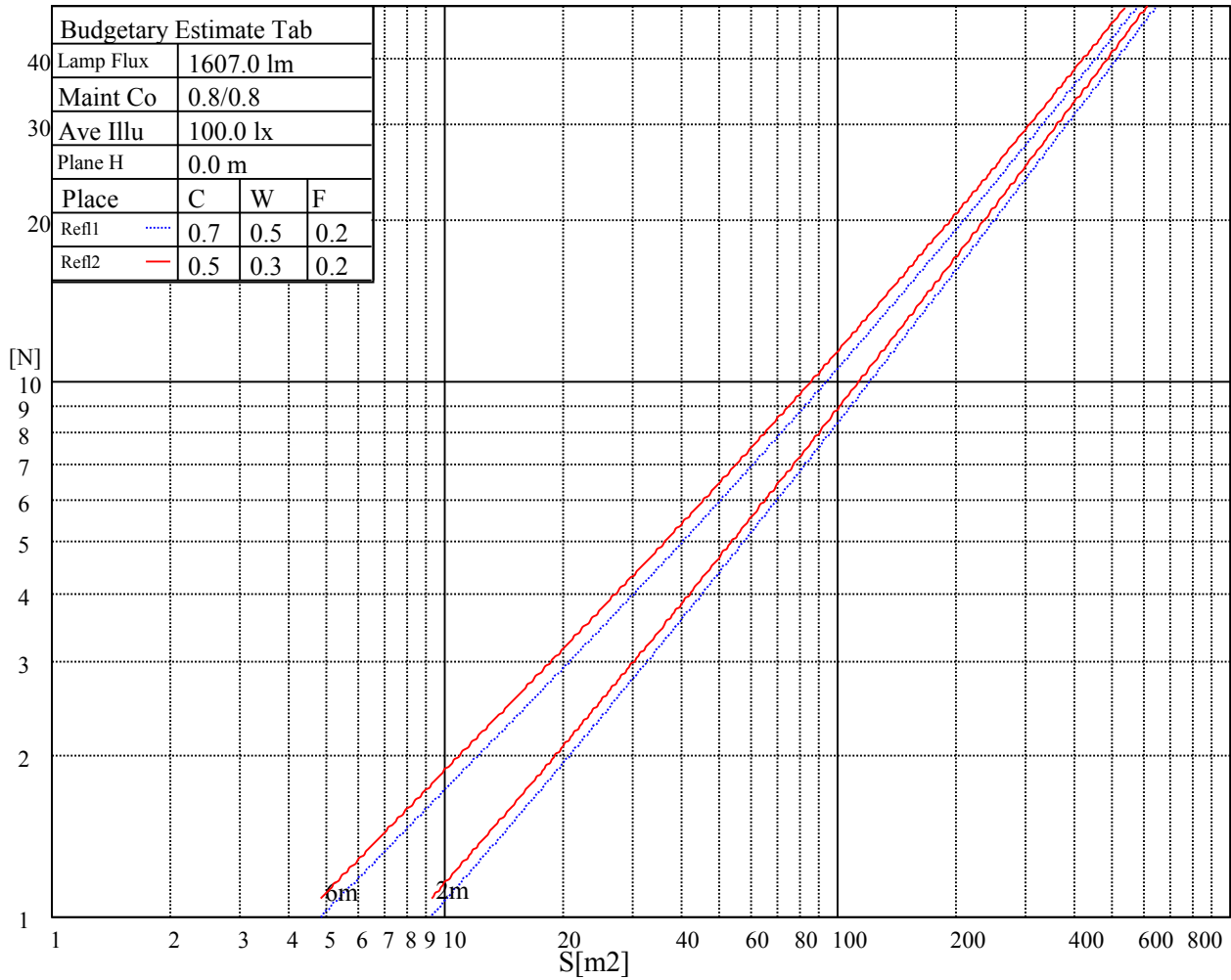
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3623	3623	3623	4798	4798	4798	11312	11312	11312

Glare Table

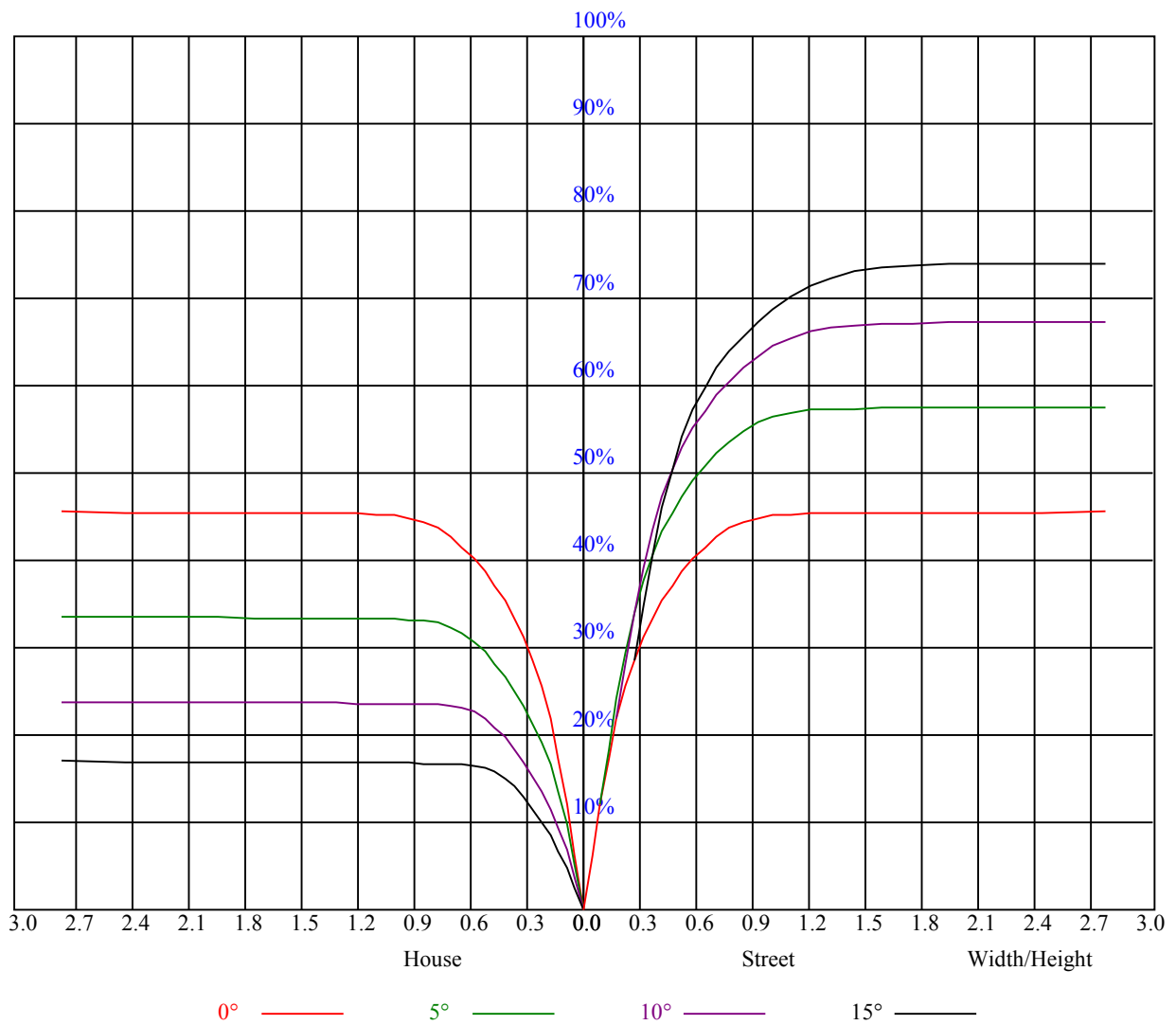
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

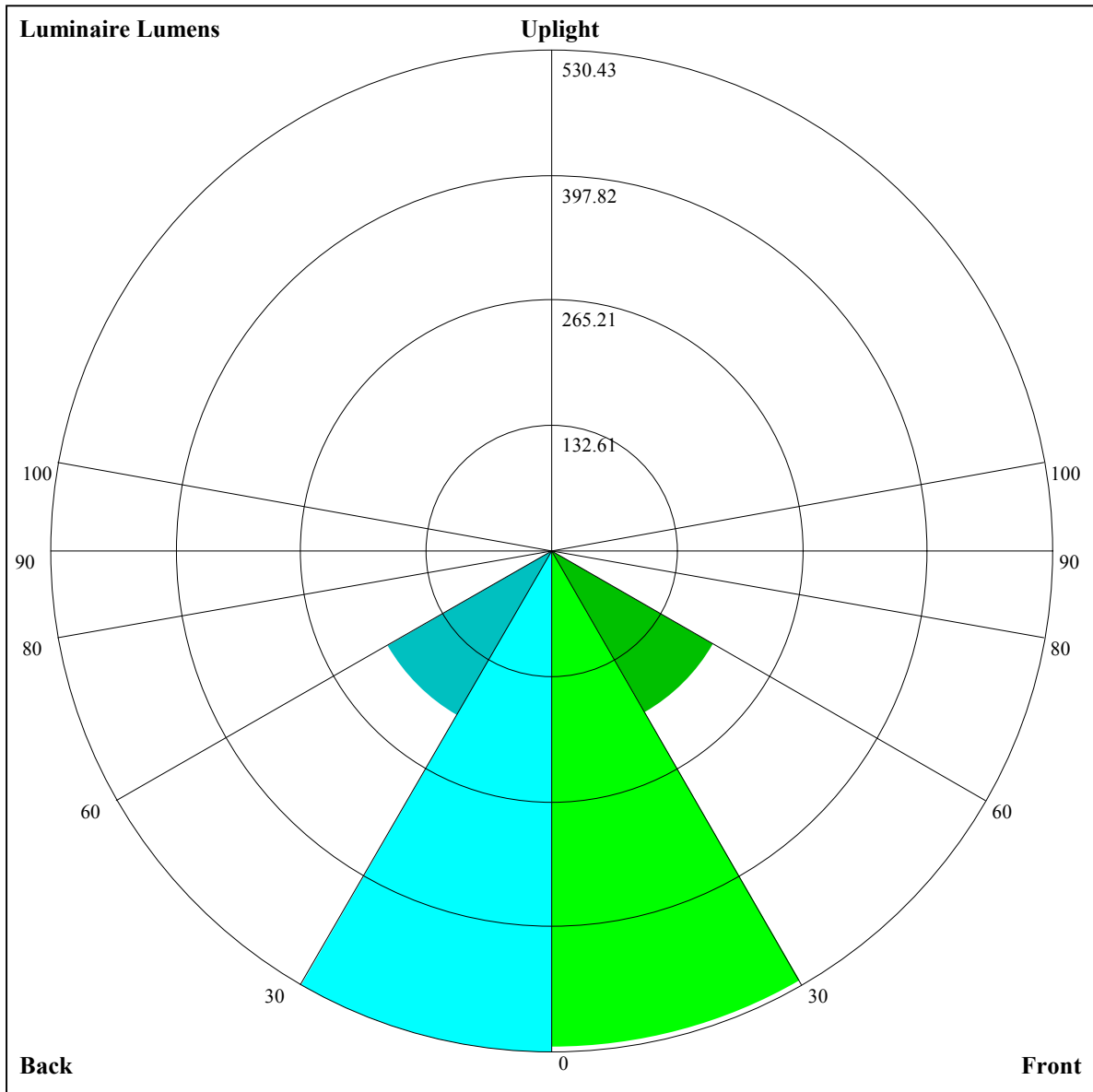
Luminance Limiting Curve





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	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	1.09	1.09	1.09	1.06	1.06	1.06	1.02	1.02	1.02	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.02	1.00	0.98	1.00	0.98	0.96	0.96	0.95	0.93	0.93	0.92	0.90	0.90	0.89	0.88	0.86
2	0.95	0.92	0.89	0.94	0.91	0.88	0.91	0.88	0.86	0.88	0.86	0.84	0.86	0.84	0.83	0.81
3	0.90	0.85	0.82	0.88	0.85	0.82	0.86	0.83	0.80	0.84	0.81	0.79	0.82	0.80	0.78	0.76
4	0.85	0.80	0.76	0.84	0.79	0.76	0.82	0.78	0.75	0.80	0.77	0.74	0.78	0.76	0.73	0.72
5	0.80	0.75	0.72	0.79	0.75	0.71	0.78	0.74	0.71	0.76	0.73	0.70	0.75	0.72	0.69	0.68
6	0.76	0.71	0.67	0.75	0.71	0.67	0.74	0.70	0.67	0.73	0.69	0.66	0.71	0.68	0.66	0.65
7	0.72	0.67	0.64	0.72	0.67	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.61
8	0.69	0.64	0.60	0.68	0.64	0.60	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.58
9	0.66	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.64	0.60	0.57	0.63	0.59	0.57	0.56
10	0.63	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.61	0.57	0.55	0.53





Luminaire Lumens:

FL=525.56,FM=197.16,FH=3.68,FVH=1.37

BL=530.43,BM=201.2,BH=3.66,BVH=1.35

UL=0,UH=0

BUG Rating:B2-U0-G0

Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	4877.52	4825.49	4730.68	4591.40	4401.77	4117.33	3867.29	3599.63	3326.94
45.0	4832.21	4875.84	4866.61	4788.58	4673.63	4506.65	4297.73	3997.35	3735.56
90.0	4879.19	4869.13	4815.43	4710.54	4557.00	4305.28	4073.70	3751.50	3477.13
135.0	4826.33	4875.00	4880.87	4823.82	4726.49	4539.38	4339.68	4108.94	3785.90
180.0	4877.52	4864.93	4808.71	4677.82	4520.92	4267.52	4025.87	3761.57	3420.08
225.0	4832.21	4747.46	4608.18	4376.60	4155.93	3899.18	3558.52	3280.79	2989.64
270.0	4879.19	4834.72	4746.62	4603.15	4372.40	4148.38	3887.43	3618.09	3263.17
315.0	4826.33	4695.44	4535.18	4332.13	4098.03	3770.80	3493.91	3213.67	2934.26
360.0	4877.52	4825.49	4730.68	4591.40	4401.77	4117.33	3867.29	3599.63	3326.94
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	2978.73	2698.49	2429.99	1931.59	1654.37	1654.37	1418.17	1257.07	1120.56
45.0	3467.06	3194.37	2846.16	2580.18	2315.88	2056.61	1760.42	1552.34	1320.76
90.0	3205.28	2850.36	2575.15	2312.52	1640.27	1640.27	1539.00	1349.71	1184.50
135.0	3515.73	3241.36	2964.47	2621.29	2356.15	2097.72	1858.59	1585.90	1387.88
180.0	3141.51	2859.59	2579.34	2242.88	1990.32	1752.87	1541.43	1317.40	1165.53
225.0	2705.20	2434.19	1916.49	1639.10	1639.10	1444.43	1231.31	1088.42	940.08
270.0	2987.12	2638.08	2364.54	2101.92	1805.73	1588.42	1394.59	1189.87	1052.26
315.0	2588.57	3241.36	1673.33	1673.33	1573.15	1392.08	1199.09	1065.85	957.20
360.0	2978.73	2698.49	2429.99	1931.59	1654.37	1654.37	1418.17	1257.07	1120.56
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	980.02	888.14	816.99	757.50	704.89	671.16	646.91	626.61	606.72
45.0	1161.34	1032.96	910.46	833.27	769.50	721.67	678.88	652.87	632.73
90.0	1014.92	905.93	818.08	732.41	682.07	640.45	605.04	582.89	567.37
135.0	1214.20	1040.51	931.44	824.04	754.40	697.34	657.06	621.82	598.33
180.0	1031.28	895.36	816.49	756.07	694.82	661.26	634.41	610.92	596.65
225.0	842.33	764.80	695.07	655.55	621.49	590.19	571.98	555.96	544.63
270.0	939.83	845.85	756.91	702.37	659.58	626.86	596.65	578.19	561.41
315.0	851.73	787.20	735.43	695.75	664.87	634.16	614.11	598.33	581.47
360.0	980.02	888.14	816.99	757.50	704.89	671.16	646.91	626.61	606.72
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	593.04	581.38	568.71	559.82	549.16	540.10	527.85	514.34	498.82
45.0	616.79	600.85	589.10	580.71	568.96	559.73	548.83	537.08	522.82
90.0	548.16	538.84	527.68	520.63	510.23	503.94	493.87	484.05	468.11
135.0	580.71	567.29	556.38	547.15	540.44	535.40	530.37	526.17	515.26
180.0	584.91	575.68	566.45	561.41	553.86	547.99	536.24	522.82	506.87
225.0	532.13	523.65	516.69	510.65	503.52	495.55	485.65	474.32	460.81
270.0	544.63	534.56	523.65	515.26	508.55	501.84	489.25	476.67	464.92
315.0	570.05	559.99	548.74	539.51	527.68	514.59	502.51	490.18	466.77
360.0	593.04	581.38	568.71	559.82	549.16	540.10	527.85	514.34	498.82
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	480.78	453.34	418.77	368.35	325.13	279.07	233.17	175.78	132.82
45.0	508.55	492.61	466.60	431.36	422.97	375.98	294.09	249.70	204.90
90.0	453.43	432.95	394.27	360.37	322.87	274.71	236.28	186.94	147.42
135.0	506.03	495.97	470.79	441.43	424.65	424.65	302.23	256.33	208.76
180.0	494.29	472.47	434.71	426.32	426.32	304.49	244.84	198.19	152.71
225.0	430.27	400.31	364.57	326.39	273.70	230.99	188.12	147.76	98.67
270.0	450.66	425.49	425.49	349.55	310.28	256.92	215.05	173.43	124.10
315.0	439.33	406.94	368.01	314.56	268.50	221.01	174.27	119.31	81.81
360.0	480.78	453.34	418.77	368.35	325.13	279.07	233.17	175.78	132.82

Intensity data(cd)

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	84.07	52.44	30.71	17.62	14.68	12.42	9.90	8.22	6.80
45.0	152.46	111.85	76.94	43.04	27.60	21.14	18.04	15.69	13.34
90.0	110.25	77.78	46.65	33.48	27.60	23.91	20.22	17.62	15.27
135.0	162.86	110.08	75.26	48.16	29.28	23.07	20.47	17.03	14.60
180.0	102.53	68.30	41.53	26.68	20.89	17.79	15.19	12.50	10.49
225.0	66.62	41.62	28.61	23.33	20.39	16.87	14.43	12.25	9.98
270.0	89.28	53.20	36.08	27.69	24.75	21.06	18.38	16.11	13.84
315.0	45.81	28.53	19.80	16.53	14.10	12.00	10.07	8.05	6.88
360.0	84.07	52.44	30.71	17.62	14.68	12.42	9.90	8.22	6.80
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.71	5.03	4.70	4.53	4.36	4.20	4.11	4.03	3.94
45.0	11.50	9.98	8.89	7.80	7.13	6.29	5.79	5.29	4.95
90.0	12.84	11.16	9.98	8.56	7.55	6.71	6.04	5.45	5.03
135.0	12.08	10.32	9.06	7.89	7.22	6.63	6.04	5.54	5.03
180.0	8.81	7.30	6.54	6.13	5.71	5.37	5.03	4.70	4.45
225.0	8.64	7.80	7.13	6.29	5.71	5.20	4.70	4.36	4.11
270.0	11.58	10.07	8.89	7.55	6.71	6.21	5.54	5.03	4.70
315.0	6.04	5.71	5.29	4.95	4.70	4.36	4.20	4.03	3.86
360.0	5.71	5.03	4.70	4.53	4.36	4.20	4.11	4.03	3.94
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	3.86	3.69	3.61	3.61	3.52	3.44	3.36	3.36	3.27
45.0	4.61	4.28	4.03	3.94	3.69	3.61	3.52	3.44	3.44
90.0	4.70	4.36	4.11	4.03	3.86	3.78	3.69	3.61	3.61
135.0	4.70	4.36	4.11	3.78	3.61	3.44	3.36	3.27	3.10
180.0	4.20	3.94	3.86	3.69	3.52	3.36	3.27	3.27	3.19
225.0	3.86	3.61	3.44	3.27	3.27	3.19	3.19	3.10	3.02
270.0	4.36	4.11	3.94	3.86	3.78	3.69	3.69	3.69	3.61
315.0	3.78	3.61	3.52	3.44	3.36	3.27	3.27	3.19	3.19
360.0	3.86	3.69	3.61	3.61	3.52	3.44	3.36	3.36	3.27
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	3.19	3.19	3.10	3.10	3.02	3.02	2.94	2.85	2.77
45.0	3.36	3.27	3.27	3.27	3.19	3.10	3.02	3.02	2.94
90.0	3.61	3.52	3.44	3.36	3.27	3.19	3.19	3.10	3.02
135.0	3.10	3.02	3.02	2.94	2.85	2.85	2.77	2.68	2.68
180.0	3.10	3.02	3.02	2.94	2.94	2.85	2.85	2.77	2.77
225.0	2.94	2.85	2.85	2.85	2.77	2.68	2.68	2.60	2.60
270.0	3.52	3.44	3.44	3.36	3.27	3.19	3.19	3.02	3.02
315.0	3.10	3.10	3.02	3.02	2.94	2.94	2.85	2.77	2.68
360.0	3.19	3.19	3.10	3.10	3.02	3.02	2.94	2.85	2.77
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	2.77	2.68	2.68	2.60	2.52	2.43	2.43	2.35	2.27
45.0	2.85	2.85	2.77	2.77	2.60	2.52	2.43	2.35	2.43
90.0	2.85	2.77	2.68	2.60	2.43	2.35	2.27	2.18	2.10
135.0	2.60	2.60	2.60	2.60	2.43	2.43	2.35	2.35	2.27
180.0	2.77	2.68	2.68	2.60	2.52	2.43	2.43	2.43	2.35
225.0	2.60	2.60	2.43	2.35	2.35	2.27	2.27	2.27	2.18
270.0	2.94	2.85	2.77	2.60	2.52	2.35	2.43	2.18	2.10
315.0	2.60	2.60	2.52	2.43	2.35	2.35	2.27	2.10	2.10
360.0	2.77	2.68	2.68	2.60	2.52	2.43	2.43	2.35	2.27

Intensity data(cd)

C/γ(°)	90.0
0.0	2.10
45.0	2.18
90.0	2.18
135.0	2.18
180.0	2.10
225.0	2.10
270.0	2.18
315.0	2.10
360.0	2.10