



NATA LIGHTING CO.,LTD.
www.nata.cn
Email:info@nata.com
Tel:+86 571 85021543 Fax:+86 571 87977635
Address:Address:380JinOu Road,GaoXin Zone,Jiang Men City,Guangdong,China

Nata

Client: NT

LumCAT: 2-2970-LM2

Luminaire: 92.70.121.00

Report No: 20260630-B005

Ballast type: DC

Test No: 20260630-C005

Voltage(V): 36.990

LampCAT: CITIZEN CLU038

Current(A): 0.723

Lamp flux(lm): 3547.0

Power (W): 26.743

Number of Lamps: 1

PF: 0.000

Length(mm): 75

Width(mm): 75

Phm Type: C

Height(mm): 43

Photometric Results

Lumens(lm): 3485.54, Efficiency(%): 98.27% , Luminous Efficacy(lm/W): 130.33

Central intensity(cd): 3222.583, Maximum intensity(cd): 3515.204

Angle of maximum intensity: C=0.0 γ =17.0

Beam Angle(50%Imax): [C0/180]Total=63.6

[C90/270]Total=63.6

Field angle(10%Imax): [C0/180]Total=79.2

[C90/270]Total=79.2

Maximum s/h(1/2): C0_180=1.11 C90_270=1.11

Maximum s/h(1/4): C0_180=0.94 C90_270=0.94

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 98.27%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.203%

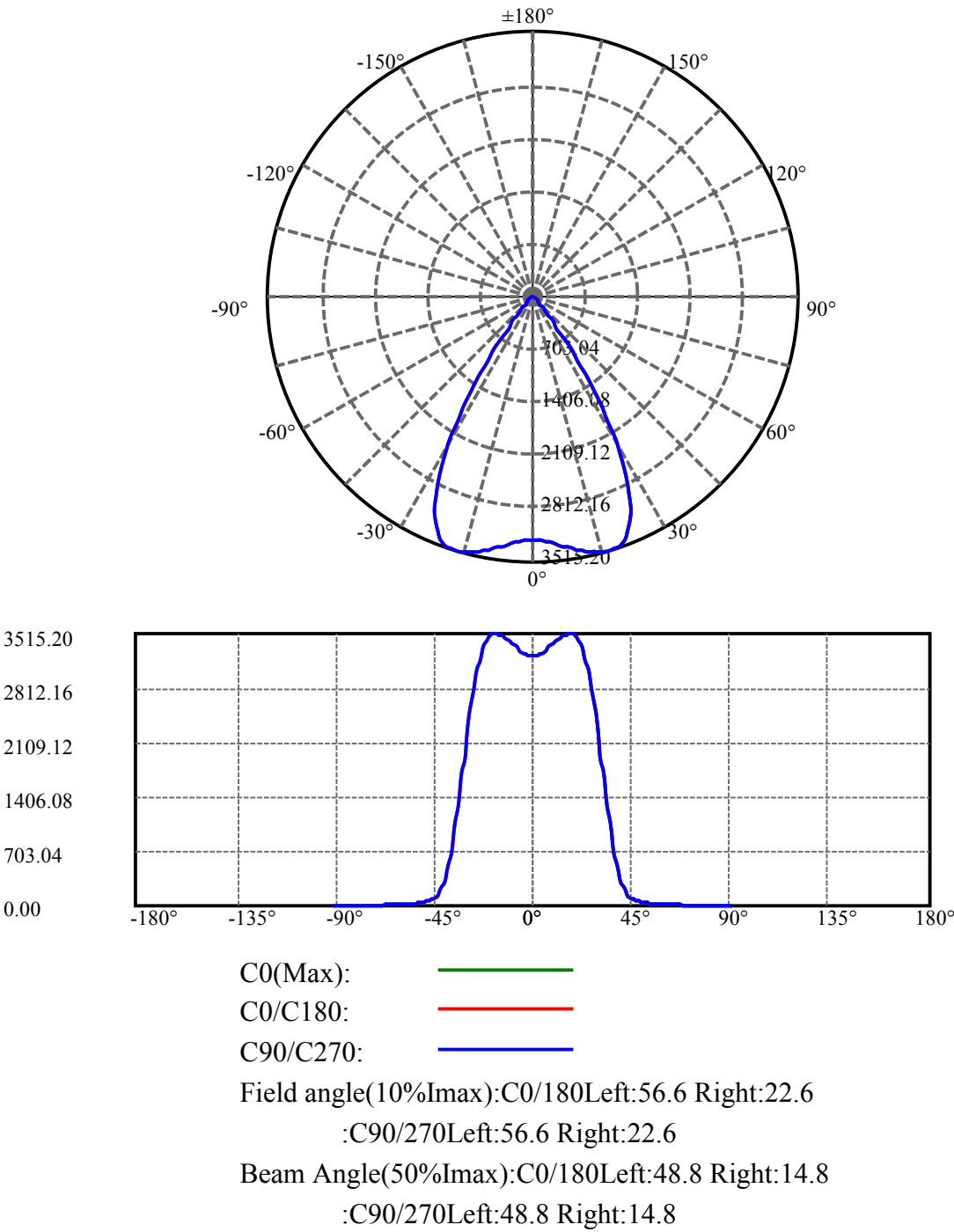
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3222.583	0.000	0	0.00%	0.00%
1.0	3225.520	3.085	3.085	0.09%	0.09%
2.0	3233.386	9.270	12.356	0.26%	0.35%
3.0	3246.287	15.497	27.853	0.44%	0.80%
4.0	3262.019	21.785	49.638	0.61%	1.42%
5.0	3284.359	28.162	77.801	0.79%	2.23%
6.0	3307.328	34.641	112.442	0.98%	3.23%
7.0	3333.968	41.222	153.664	1.16%	4.41%
8.0	3356.308	47.881	201.545	1.35%	5.78%
9.0	3380.116	54.595	256.14	1.54%	7.35%
10.0	3406.756	61.419	317.559	1.73%	9.11%
11.0	3429.516	68.308	385.867	1.93%	11.07%
12.0	3453.324	75.239	461.106	2.12%	13.23%
13.0	3470.944	82.174	543.28	2.32%	15.59%
14.0	3487.620	89.069	632.349	2.51%	18.14%
15.0	3502.304	95.961	728.31	2.71%	20.90%
16.0	3510.799	102.762	831.071	2.90%	23.84%
17.0	3515.204	109.414	940.485	3.08%	26.98%
18.0	3509.960	115.830	1056.315	3.27%	30.31%
19.0	3495.906	121.888	1178.203	3.44%	33.80%
20.0	3468.846	127.474	1305.677	3.59%	37.46%
21.0	3425.950	132.394	1438.071	3.73%	41.26%
22.0	3363.650	136.440	1574.511	3.85%	45.17%
23.0	3278.381	139.368	1713.879	3.93%	49.17%
24.0	3171.086	141.008	1854.887	3.98%	53.22%
25.0	3056.975	141.612	1996.499	3.99%	57.28%
26.0	2917.167	141.020	2137.52	3.98%	61.33%
27.0	2764.354	139.000	2276.519	3.92%	65.31%
28.0	2556.016	134.701	2411.22	3.80%	69.18%
29.0	2404.881	129.791	2541.011	3.66%	72.90%
30.0	2173.879	123.626	2664.637	3.49%	76.45%
31.0	1902.308	113.434	2778.071	3.20%	79.70%
32.0	1713.971	103.602	2881.673	2.92%	82.68%
33.0	1516.573	95.173	2976.846	2.68%	85.41%
34.0	1282.413	84.706	3061.552	2.39%	87.84%
35.0	1065.475	72.917	3134.468	2.06%	89.93%
36.0	870.174	61.631	3196.1	1.74%	91.70%
37.0	673.888	50.359	3246.458	1.42%	93.14%

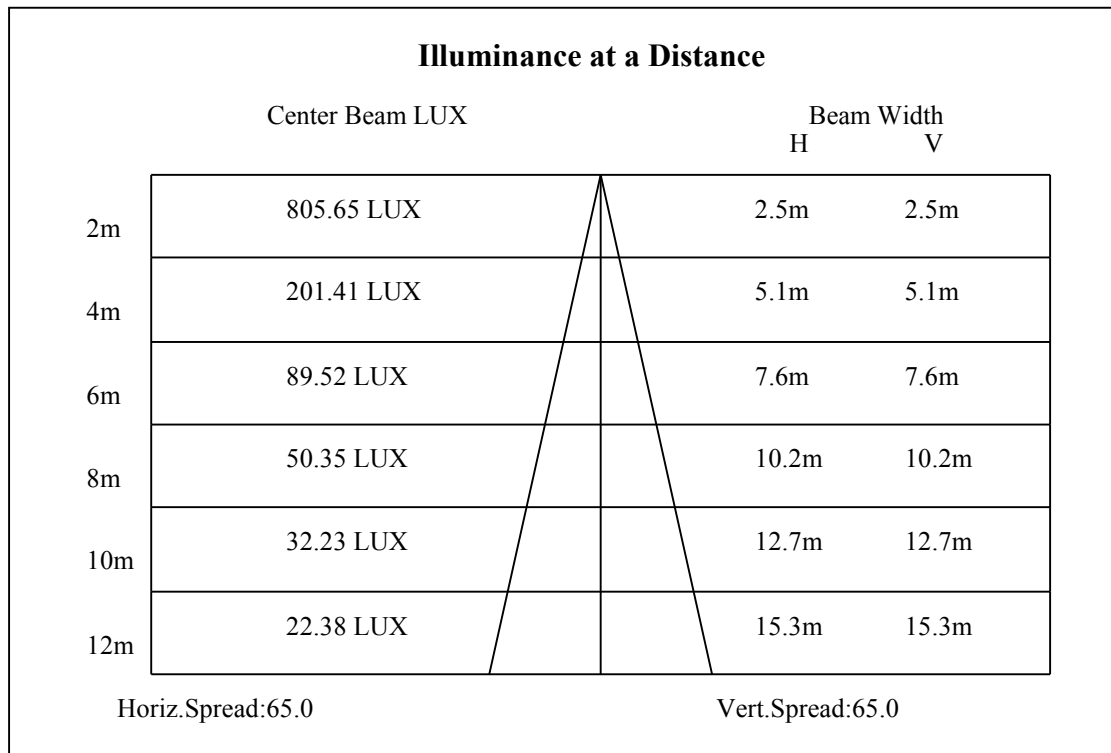
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	527.116	40.088	3286.546	1.13%	94.29%
39.0	414.336	32.134	3318.681	0.91%	95.21%
40.0	310.021	25.263	3343.944	0.71%	95.94%
41.0	247.553	19.855	3363.799	0.56%	96.51%
42.0	192.112	15.974	3379.772	0.45%	96.97%
43.0	139.546	12.286	3392.058	0.35%	97.32%
44.0	114.468	9.587	3401.645	0.27%	97.59%
45.0	93.324	7.986	3409.631	0.23%	97.82%
46.0	78.452	6.718	3416.349	0.19%	98.01%
47.0	66.684	5.772	3422.121	0.16%	98.18%
48.0	56.322	4.973	3427.094	0.14%	98.32%
49.0	48.487	4.304	3431.398	0.12%	98.45%
50.0	42.100	3.777	3435.174	0.11%	98.55%
51.0	37.181	3.354	3438.529	0.09%	98.65%
52.0	32.839	3.005	3441.533	0.08%	98.74%
53.0	29.094	2.694	3444.227	0.08%	98.81%
54.0	26.210	2.438	3446.665	0.07%	98.88%
55.0	23.640	2.225	3448.89	0.06%	98.95%
56.0	21.553	2.042	3450.932	0.06%	99.01%
57.0	19.602	1.882	3452.814	0.05%	99.06%
58.0	18.134	1.745	3454.559	0.05%	99.11%
59.0	16.970	1.641	3456.2	0.05%	99.16%
60.0	15.795	1.548	3457.748	0.04%	99.20%
61.0	14.862	1.463	3459.211	0.04%	99.24%
62.0	14.002	1.391	3460.602	0.04%	99.28%
63.0	13.310	1.328	3461.93	0.04%	99.32%
64.0	12.575	1.270	3463.201	0.04%	99.36%
65.0	11.988	1.216	3464.416	0.03%	99.39%
66.0	11.432	1.169	3465.585	0.03%	99.43%
67.0	11.034	1.130	3466.714	0.03%	99.46%
68.0	10.698	1.101	3467.815	0.03%	99.49%
69.0	10.362	1.074	3468.89	0.03%	99.52%
70.0	10.016	1.047	3469.936	0.03%	99.55%
71.0	9.660	1.017	3470.953	0.03%	99.58%
72.0	9.293	0.985	3471.939	0.03%	99.61%
73.0	8.852	0.949	3472.887	0.03%	99.64%
74.0	8.474	0.911	3473.798	0.03%	99.66%
75.0	8.118	0.877	3474.675	0.02%	99.69%

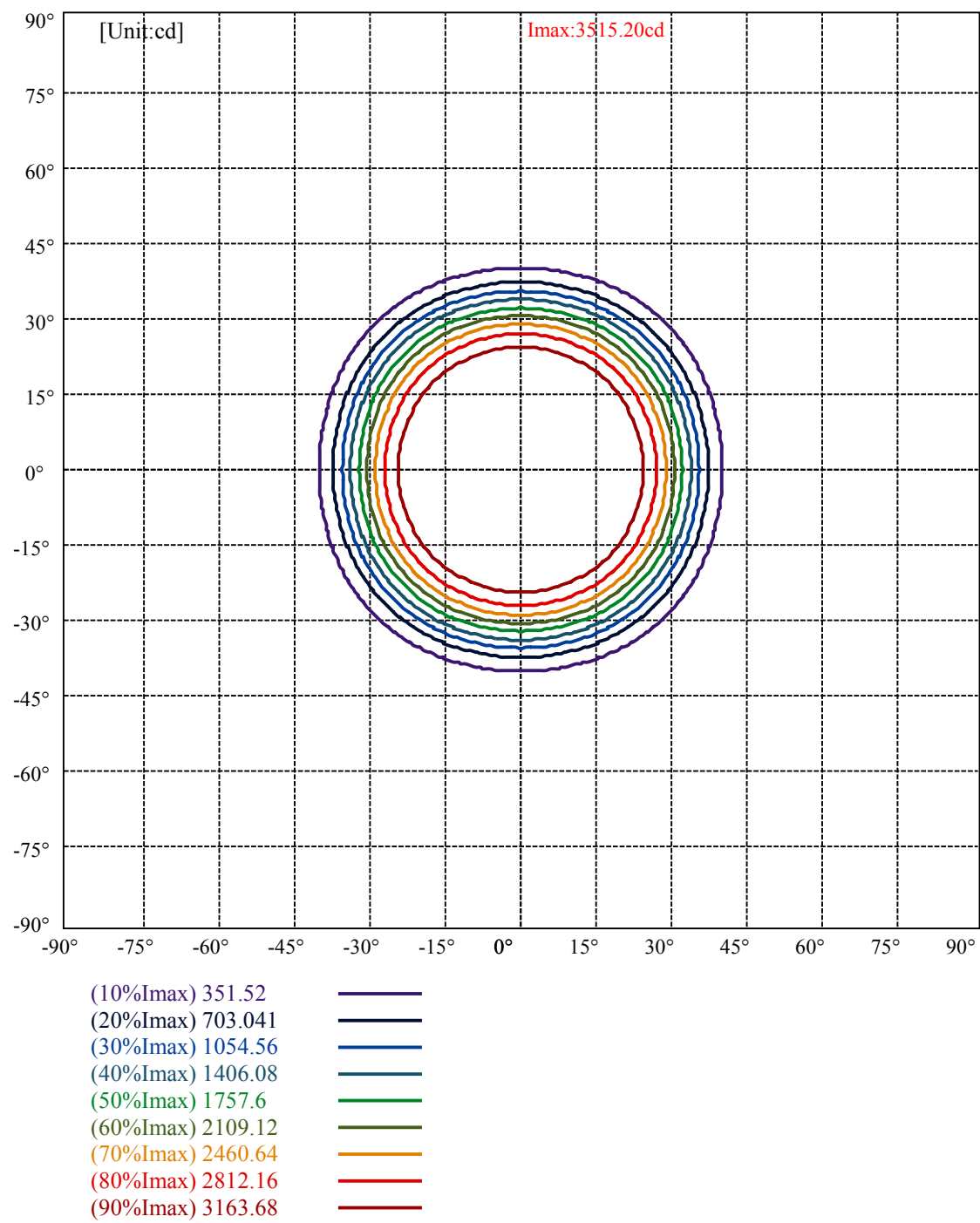
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.793	0.845	3475.52	0.02%	99.71%
77.0	7.572	0.819	3476.339	0.02%	99.74%
78.0	7.394	0.801	3477.14	0.02%	99.76%
79.0	7.205	0.784	3477.924	0.02%	99.78%
80.0	7.069	0.770	3478.694	0.02%	99.80%
81.0	6.912	0.756	3479.45	0.02%	99.83%
82.0	6.786	0.743	3480.193	0.02%	99.85%
83.0	6.650	0.730	3480.923	0.02%	99.87%
84.0	6.461	0.714	3481.637	0.02%	99.89%
85.0	6.293	0.696	3482.333	0.02%	99.91%
86.0	6.104	0.678	3483.011	0.02%	99.93%
87.0	5.884	0.656	3483.667	0.02%	99.95%
88.0	5.758	0.638	3484.305	0.02%	99.96%
89.0	5.632	0.624	3484.929	0.02%	99.98%
90.0	5.527	0.612	3485.541	0.02%	100.00%

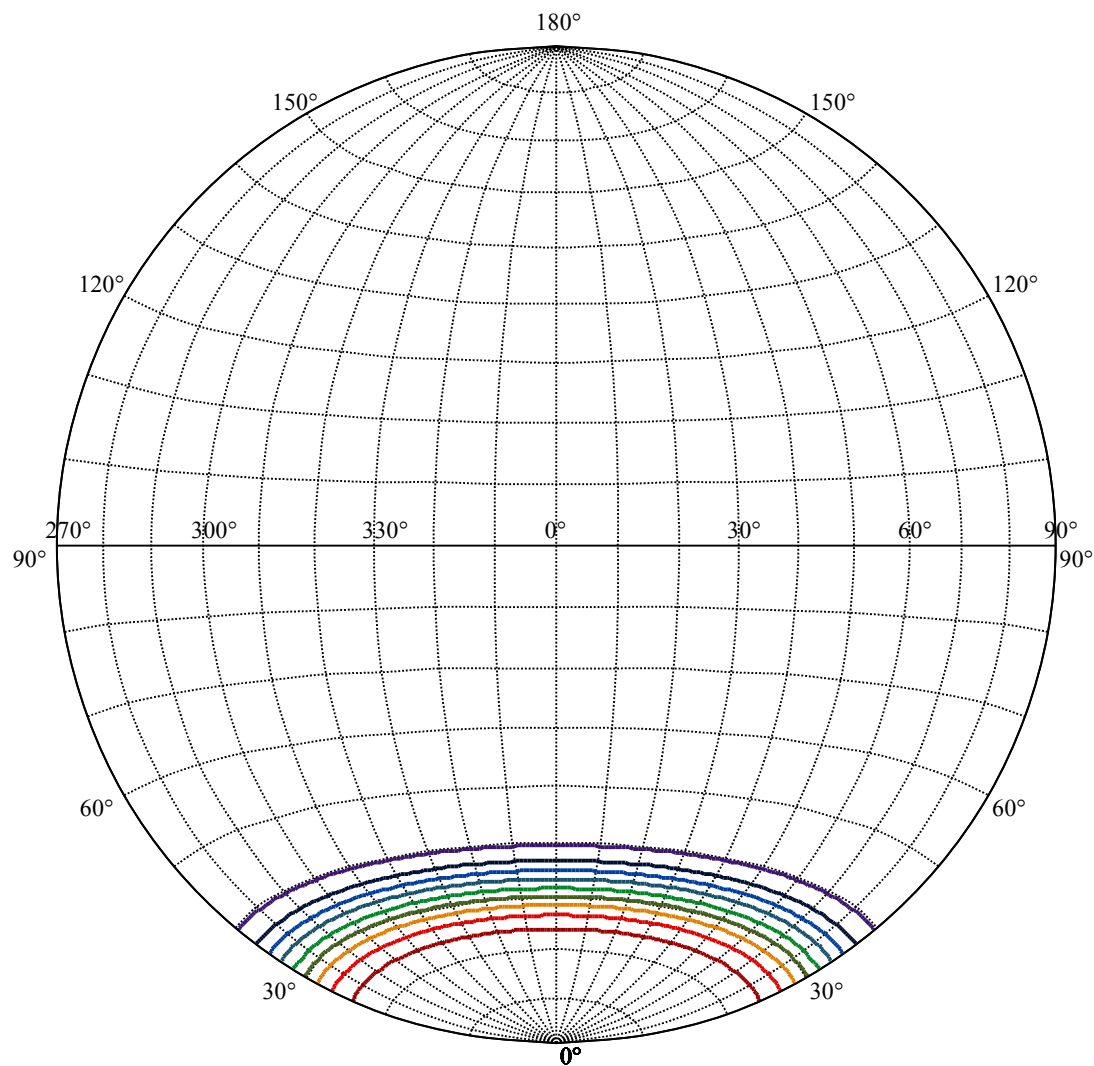
ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	2664.64	75.12%	76.45%
0-40	3343.94	94.28%	95.94%
0-60	3457.75	97.48%	99.20%
0-90	3484.93	98.25%	99.98%
0-120	3484.93	98.25%	99.98%
0-180	3485.54	98.27%	100.00%
60-90	27.18	0.77%	0.78%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-31.10	2788.43	78.61%	80.00%

ZONAL LUMEN SUMMARY	
0-10	317.56
10-20	988.12
20-30	1358.96
30-40	679.31
40-50	91.23
50-60	22.57
60-70	12.19
70-80	8.76
80-90	6.24
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







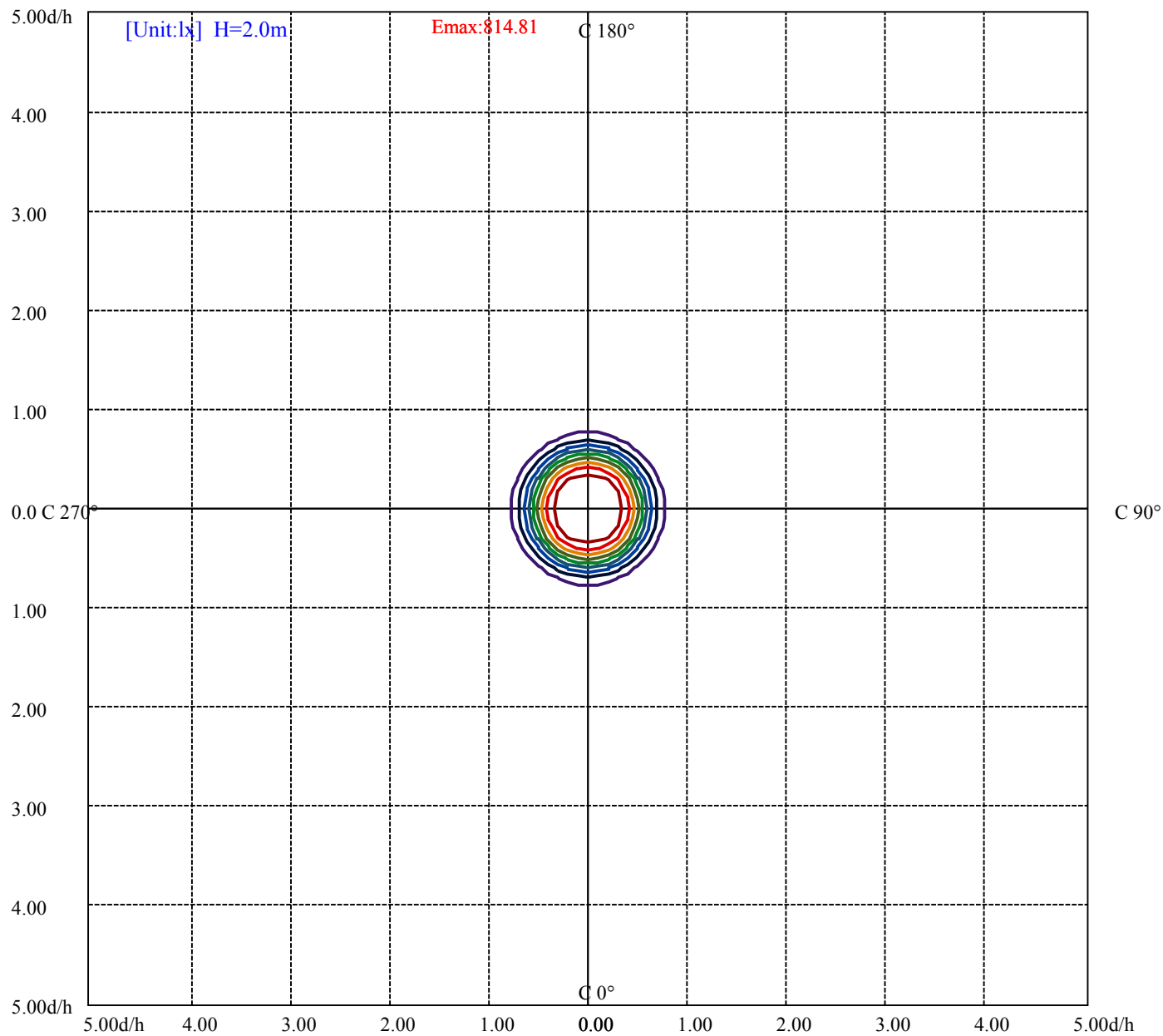


House

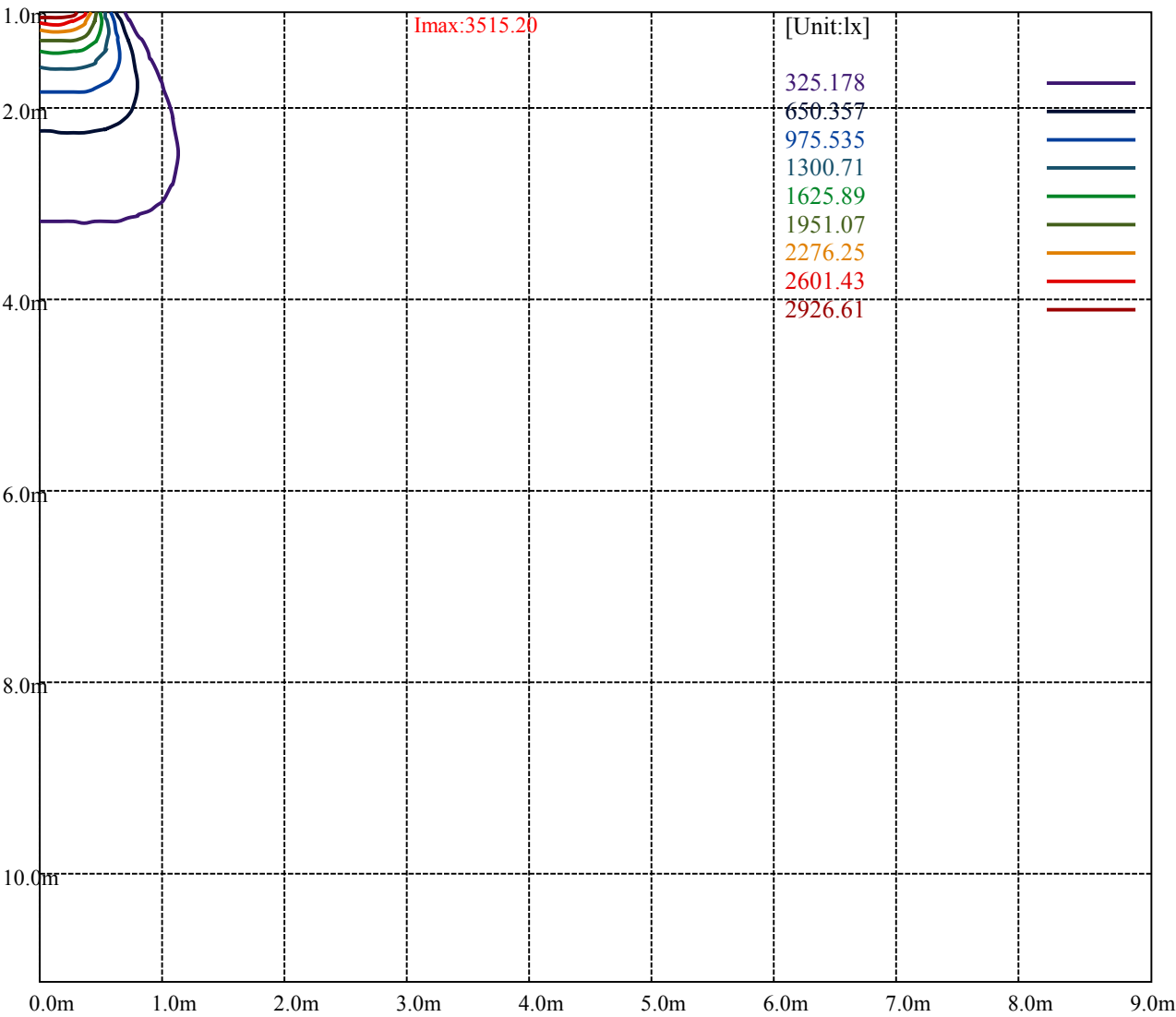
[Unit:cd]

Road

Imax:3515.20	
(10%Imax) 351.52	
(20%Imax) 703.041	
(30%Imax) 1054.56	
(40%Imax) 1406.08	
(50%Imax) 1757.6	
(60%Imax) 2109.12	
(70%Imax) 2460.64	
(80%Imax) 2812.16	
(90%Imax) 3163.68	



(10%Emax)	81.4805	—
(20%Emax)	162.961	—
(30%Emax)	244.4415	—
(40%Emax)	325.9225	—
(50%Emax)	407.4025	—
(60%Emax)	488.8825	—
(70%Emax)	570.3625	—
(80%Emax)	651.845	—
(90%Emax)	733.325	—



Luminance Table

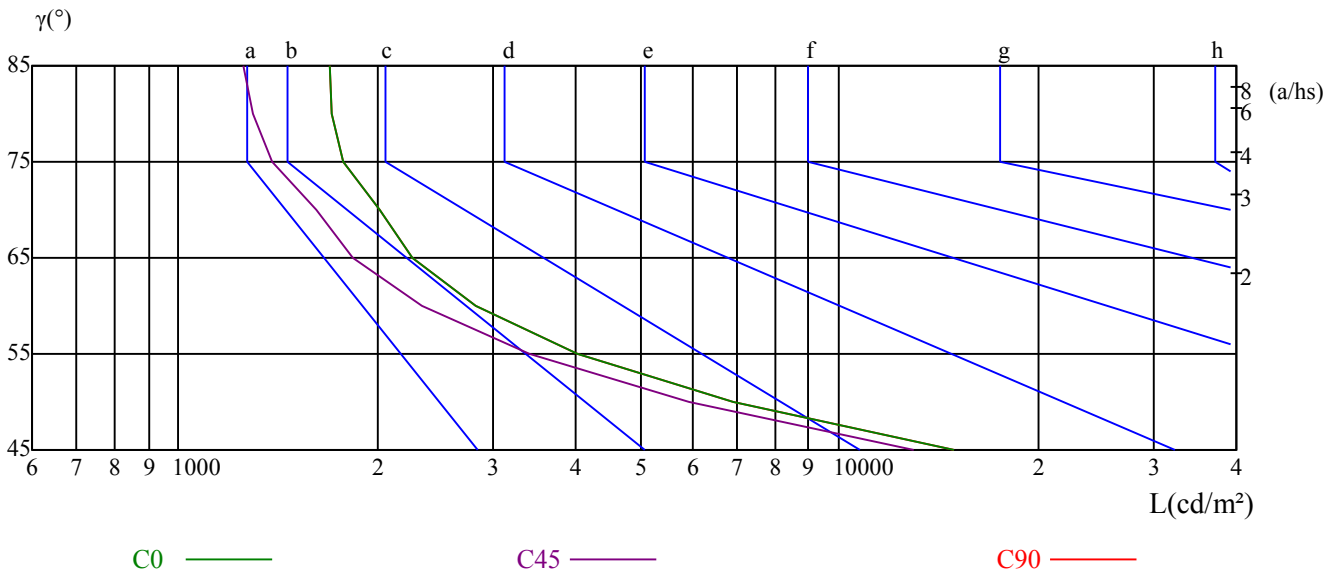
γ	45	50	55	60	65	70	75	80	85
C0	14913	6917	4029	2818	2262	2022	1776	1702	1699
C45	12957	5922	3395	2336	1841	1613	1385	1293	1250
C90	14913	6917	4029	2818	2262	2022	1776	1702	1699

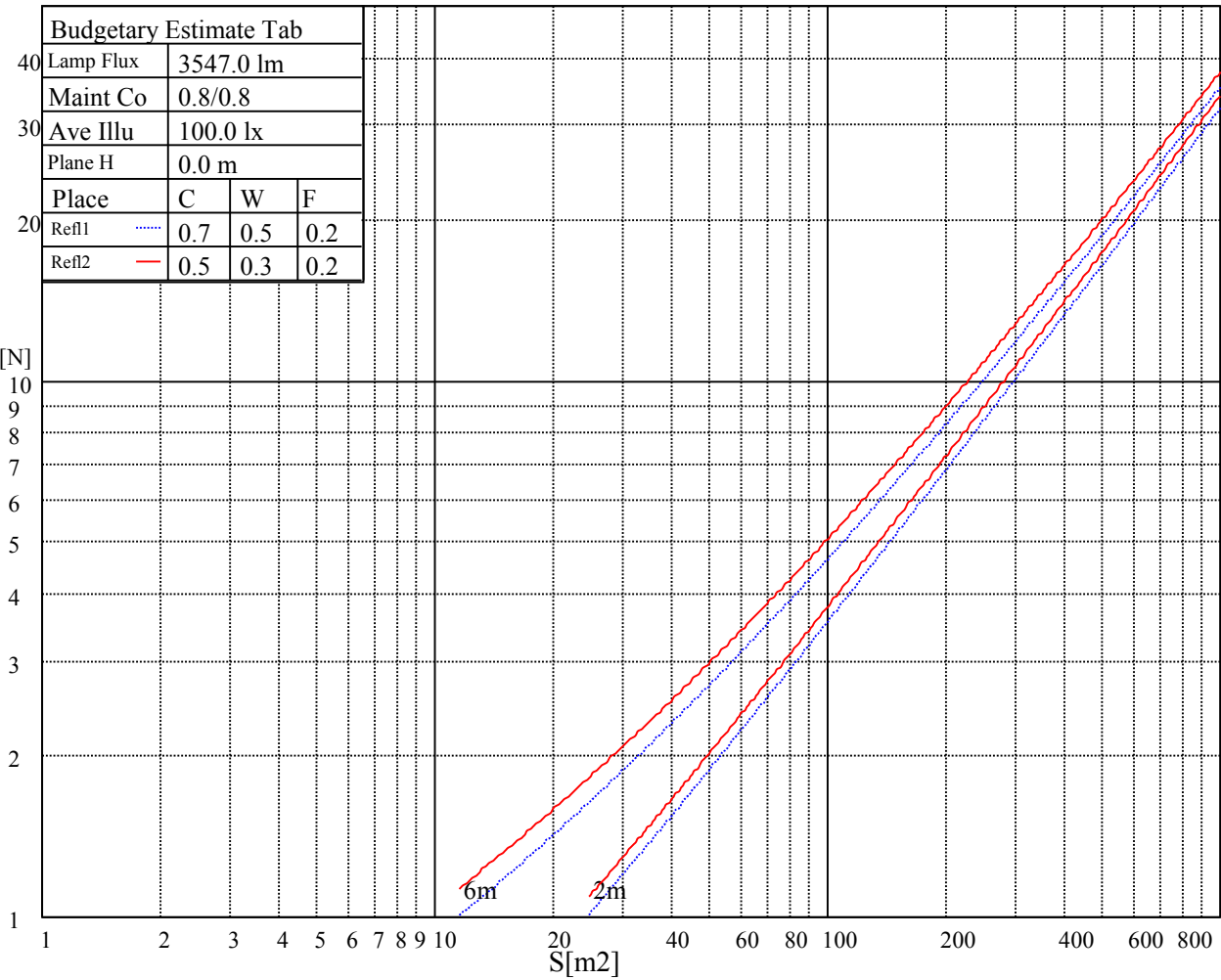
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5043	5043	5043	5576	5576	5576	12836	12836	12836

Glare Table

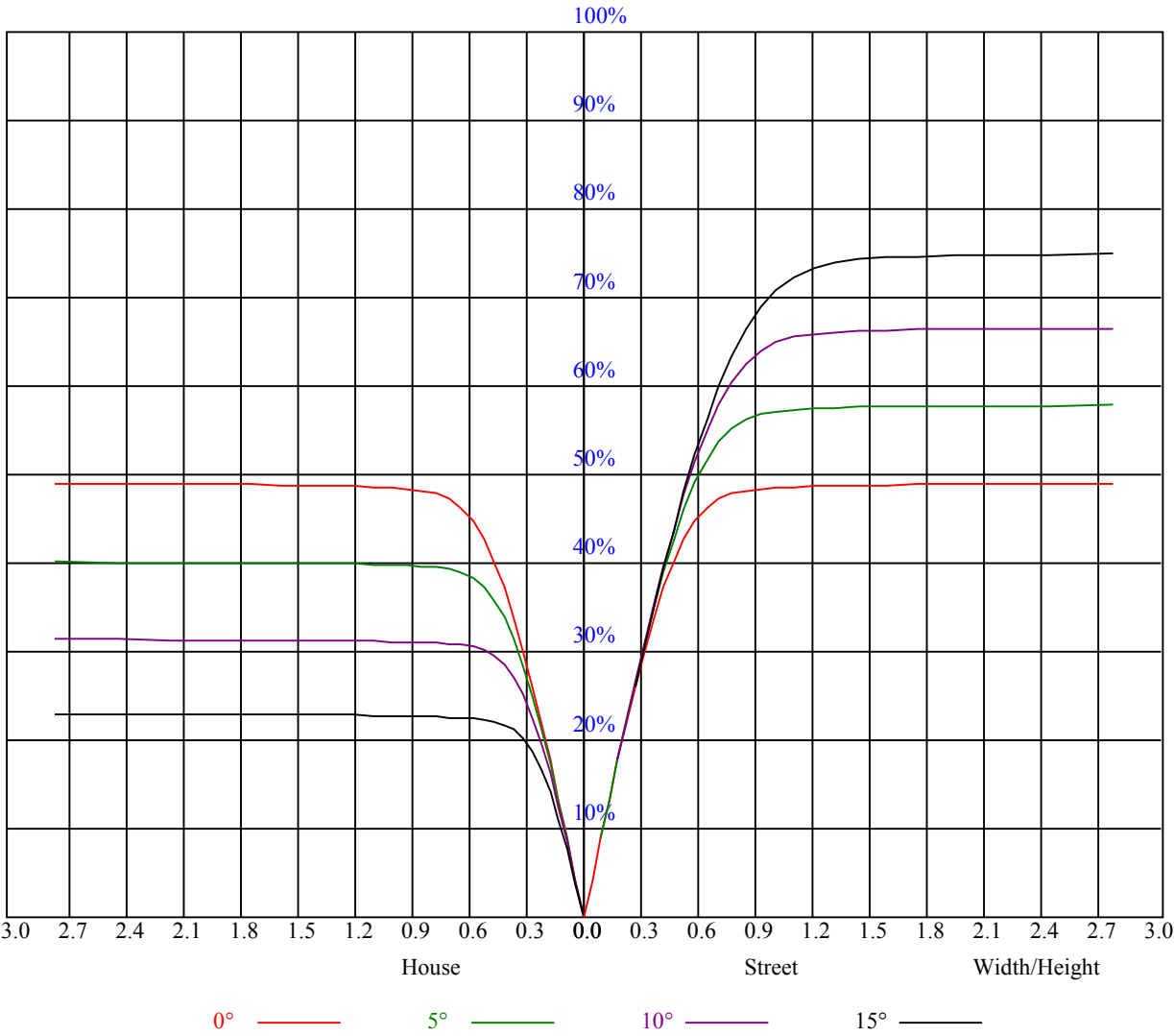
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

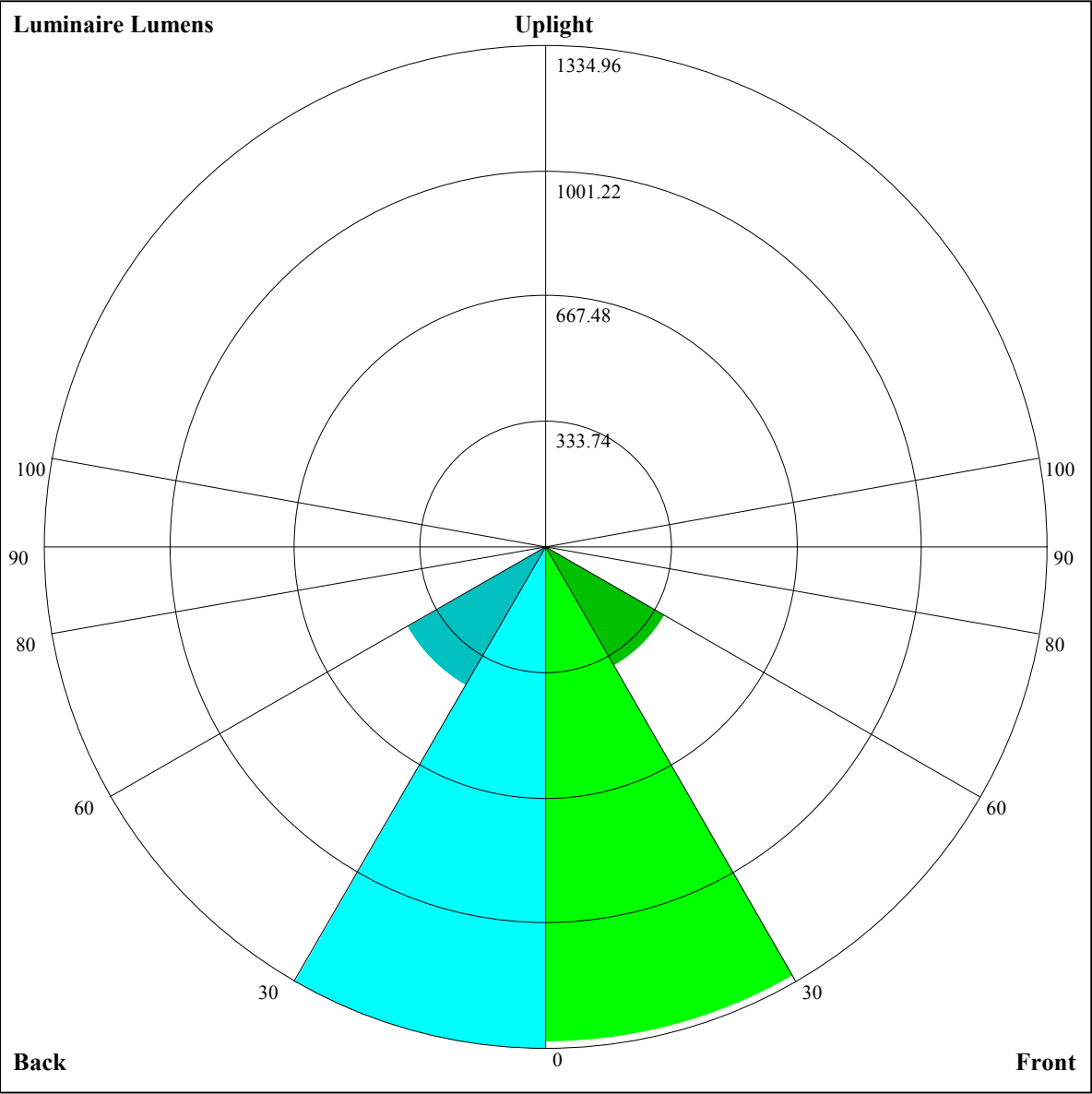
Luminance Limiting Curve





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	1.17	1.17	1.17	1.14	1.14	1.14	1.09	1.09	1.09	1.05	1.05	1.05	1.00	1.00	1.00	0.98
1	1.09	1.06	1.04	1.07	1.05	1.03	1.03	1.01	0.99	0.99	0.98	0.96	0.96	0.95	0.94	0.92
2	1.01	0.98	0.94	1.00	0.96	0.93	0.97	0.94	0.91	0.94	0.91	0.89	0.91	0.89	0.87	0.86
3	0.95	0.90	0.86	0.93	0.89	0.85	0.91	0.87	0.84	0.88	0.85	0.83	0.86	0.84	0.81	0.80
4	0.89	0.83	0.79	0.88	0.83	0.79	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.75
5	0.83	0.78	0.73	0.82	0.77	0.73	0.81	0.76	0.72	0.79	0.75	0.72	0.77	0.74	0.71	0.70
6	0.78	0.72	0.68	0.77	0.72	0.68	0.76	0.71	0.68	0.75	0.70	0.67	0.73	0.70	0.67	0.65
7	0.74	0.68	0.64	0.73	0.67	0.63	0.72	0.67	0.63	0.70	0.66	0.63	0.69	0.65	0.62	0.61
8	0.69	0.64	0.60	0.69	0.63	0.59	0.68	0.63	0.59	0.67	0.62	0.59	0.66	0.62	0.59	0.57
9	0.65	0.60	0.56	0.65	0.60	0.56	0.64	0.59	0.56	0.63	0.59	0.55	0.62	0.58	0.55	0.54
10	0.62	0.56	0.53	0.61	0.56	0.52	0.61	0.56	0.52	0.60	0.55	0.52	0.59	0.55	0.52	0.51





Luminaire Lumens:
FL=1319.07,FM=367.53,FH=10.23,FVH=3.41
BL=1334.96,BM=424.65,BH=10.62,BVH=3.45
UL=0,UH=0

BUG Rating:B3-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	3207.79	3221.22	3237.16	3260.66	3284.15	3314.36	3357.99	3393.23	3427.63
45.0	3212.83	3211.15	3210.31	3216.19	3223.74	3238.00	3250.59	3281.63	3300.09
90.0	3217.02	3205.28	3203.60	3200.24	3211.15	3218.70	3231.29	3257.30	3265.69
135.0	3249.75	3226.25	3212.83	3195.21	3194.37	3201.08	3212.83	3234.64	3244.71
180.0	3207.79	3203.60	3205.28	3214.51	3228.77	3244.71	3263.17	3284.99	3315.19
225.0	3212.83	3222.06	3231.29	3248.07	3265.69	3297.57	3321.91	3349.60	3376.45
270.0	3217.02	3234.64	3252.26	3279.95	3300.09	3341.20	3362.18	3384.84	3414.20
315.0	3255.62	3279.95	3314.36	3355.47	3388.19	3419.24	3458.67	3485.52	3506.50
360.0	3207.79	3221.22	3237.16	3260.66	3284.15	3314.36	3357.99	3393.23	3427.63
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3461.19	3496.43	3526.64	3552.65	3567.75	3590.40	3597.96	3607.19	3611.38
45.0	3328.62	3358.83	3389.03	3425.11	3447.77	3471.26	3488.88	3513.21	3525.80
90.0	3283.31	3312.68	3331.98	3352.95	3375.61	3393.23	3417.56	3433.50	3448.60
135.0	3266.53	3283.31	3300.93	3325.26	3352.95	3375.61	3402.46	3426.79	3454.48
180.0	3345.40	3371.41	3406.65	3435.18	3455.32	3481.33	3495.59	3501.46	3506.50
225.0	3398.26	3432.66	3446.93	3466.22	3482.17	3483.01	3498.11	3493.91	3491.40
270.0	3432.66	3446.09	3461.19	3476.29	3479.65	3486.36	3494.75	3488.88	3483.84
315.0	3524.96	3552.65	3572.78	3592.92	3606.35	3619.77	3623.13	3621.45	3599.63
360.0	3461.19	3496.43	3526.64	3552.65	3567.75	3590.40	3597.96	3607.19	3611.38
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	3604.67	3589.57	3554.33	3501.46	3415.04	3317.71	3205.28	3077.74	2894.83
45.0	3530.83	3535.03	3524.96	3503.14	3471.26	3417.56	3335.33	3255.62	3121.37
90.0	3454.48	3464.55	3463.71	3433.50	3410.01	3333.65	3263.17	3160.81	3020.69
135.0	3477.97	3506.50	3519.92	3539.22	3543.42	3531.67	3485.52	3429.31	3347.08
180.0	3514.05	3500.63	3479.65	3441.05	3392.39	3327.78	3222.06	3116.34	2995.51
225.0	3466.22	3433.50	3391.55	3334.49	3235.48	3149.06	3013.13	2892.31	2764.77
270.0	3470.42	3441.89	3402.46	3348.76	3260.66	3160.81	3024.04	2894.83	2749.67
315.0	3561.04	3495.59	3414.20	3305.96	3180.95	2988.80	2820.15	2628.85	2443.41
360.0	3604.67	3589.57	3554.33	3501.46	3415.04	3317.71	3205.28	3077.74	2894.83
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	2732.89	2566.76	2391.39	1955.08	1665.11	1665.11	1431.68	1149.76	939.74
45.0	3005.58	2870.49	2699.33	2552.49	2374.61	2114.51	1896.35	1676.52	1458.36
90.0	2883.08	2732.05	2536.55	2363.70	1932.43	1645.47	1645.47	1415.57	1145.14
135.0	3235.48	3065.16	2905.73	2734.57	2510.54	2313.36	2089.33	1789.79	1543.11
180.0	2863.78	2685.06	2526.48	2349.44	2084.30	1869.50	1588.42	1364.39	1142.88
225.0	2599.48	2461.87	2286.51	1934.11	1668.38	1617.62	1407.10	1203.29	972.80
270.0	2606.19	2414.89	2241.20	2029.76	1799.02	1516.26	1303.98	1106.80	914.65
315.0	2188.34	1651.85	1651.85	1471.87	1184.08	969.95	770.25	553.19	407.11
360.0	2732.89	2566.76	2391.39	1955.08	1665.11	1665.11	1431.68	1149.76	939.74
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	747.43	542.70	404.76	271.27	202.80	160.85	133.07	102.95	84.16
45.0	1245.24	997.72	813.13	646.16	469.96	439.75	439.75	240.73	204.23
90.0	946.46	759.01	591.79	416.34	306.67	228.14	179.89	140.79	114.95
135.0	1305.66	1020.38	813.13	621.82	456.53	456.53	200.37	140.12	105.80
180.0	937.31	711.60	553.02	448.98	448.98	210.10	172.93	144.23	118.31
225.0	801.89	647.16	482.37	380.43	314.56	262.04	226.04	194.91	162.61
270.0	690.63	533.72	433.88	433.88	206.32	163.28	136.77	112.94	92.46
315.0	286.79	178.80	124.85	95.82	74.34	59.74	48.08	39.69	33.23
360.0	747.43	542.70	404.76	271.27	202.80	160.85	133.07	102.95	84.16

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	69.39	58.73	48.25	41.78	36.42	31.05	27.69	25.09	22.40
45.0	164.29	139.37	118.81	102.36	85.33	74.09	64.36	56.13	47.91
90.0	93.55	73.42	61.59	50.34	43.21	37.42	32.64	28.19	25.34
135.0	81.22	65.03	51.60	40.27	34.74	29.37	26.01	23.41	20.89
180.0	92.46	77.28	65.87	54.37	46.82	39.52	34.74	30.88	27.69
225.0	141.88	124.35	109.41	93.39	82.48	72.83	64.44	55.55	49.42
270.0	74.51	63.35	54.45	47.07	39.52	34.74	30.79	27.60	24.25
315.0	29.28	26.09	23.49	20.98	19.38	17.79	16.78	15.86	14.85
360.0	69.39	58.73	48.25	41.78	36.42	31.05	27.69	25.09	22.40
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	20.56	19.05	17.45	16.36	15.44	14.77	14.01	13.42	13.01
45.0	42.29	37.34	33.23	28.78	25.68	23.24	20.64	18.96	17.20
90.0	22.91	20.89	18.79	17.37	16.19	15.27	14.26	13.59	12.84
135.0	19.21	17.87	16.70	15.61	14.77	14.01	13.42	12.84	12.33
180.0	24.42	22.23	20.47	18.88	17.28	16.28	15.44	14.43	13.76
225.0	44.13	38.34	34.40	30.29	27.52	25.09	22.57	20.64	18.88
270.0	22.07	19.80	18.38	16.87	15.86	15.02	14.35	13.68	13.01
315.0	14.10	13.59	13.01	12.67	12.33	12.08	11.66	11.33	10.99
360.0	20.56	19.05	17.45	16.36	15.44	14.77	14.01	13.42	13.01
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	12.50	11.91	11.41	10.99	10.66	10.40	10.07	9.82	9.48
45.0	16.03	14.94	13.93	12.92	12.17	11.66	11.16	10.74	10.40
90.0	12.25	11.75	11.08	10.74	10.40	10.15	9.98	9.73	9.57
135.0	12.00	11.58	11.24	10.82	10.49	10.15	9.98	9.73	9.57
180.0	13.17	12.42	11.91	11.33	10.99	10.74	10.57	10.24	9.90
225.0	17.37	15.77	14.68	13.84	13.09	12.42	11.66	11.08	10.32
270.0	12.50	12.00	11.58	10.99	10.74	10.49	10.24	9.90	9.48
315.0	10.66	10.24	10.07	9.82	9.73	9.57	9.23	8.89	8.56
360.0	12.50	11.91	11.41	10.99	10.66	10.40	10.07	9.82	9.48
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.98	8.56	8.31	7.89	7.55	7.38	7.30	7.13	6.96
45.0	9.90	9.40	8.89	8.47	7.97	7.72	7.47	7.22	7.13
90.0	9.40	8.89	8.56	8.22	7.89	7.64	7.47	7.30	7.22
135.0	9.40	9.23	8.98	8.73	8.39	8.14	7.80	7.55	7.38
180.0	9.57	9.15	8.73	8.22	7.89	7.64	7.38	7.22	7.05
225.0	9.73	9.06	8.47	7.97	7.64	7.38	7.30	7.05	6.96
270.0	9.15	8.73	8.31	7.97	7.72	7.55	7.38	7.22	7.05
315.0	8.22	7.80	7.55	7.47	7.30	7.13	7.05	6.96	6.80
360.0	8.98	8.56	8.31	7.89	7.55	7.38	7.30	7.13	6.96
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	6.88	6.71	6.63	6.46	6.38	6.04	5.87	5.79	5.45
45.0	6.96	6.80	6.71	6.63	6.46	6.29	5.87	5.79	5.62
90.0	6.96	6.88	6.80	6.63	6.46	6.21	6.04	5.87	5.79
135.0	7.30	7.13	6.96	6.88	6.71	6.63	6.29	6.21	6.04
180.0	6.96	6.80	6.63	6.46	6.21	6.04	5.87	5.71	5.71
225.0	6.71	6.63	6.46	6.04	5.96	5.79	5.62	5.54	5.37
270.0	6.88	6.80	6.63	6.46	6.21	6.04	5.96	5.62	5.54
315.0	6.63	6.54	6.38	6.13	5.96	5.79	5.54	5.54	5.54
360.0	6.88	6.71	6.63	6.46	6.38	6.04	5.87	5.79	5.45

Intensity data(cd)

C/ $\gamma(^{\circ})$	90.0
0.0	5.45
45.0	5.37
90.0	5.62
135.0	5.87
180.0	5.37
225.0	5.45
270.0	5.54
315.0	5.54
360.0	5.45