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Nata

LumCAT: 2-1259-N
Luminaire: 92.70.045.00+92.70.059.00
Report No: NATA0100
Test No: GC2018070210
LampCAT: NICHIA NFCWD096B-V3
Lamp flux(lm): 2246.0
Number of Lamps: 1
Length(mm): 70
Phm Type: C

Voltage(V): 33.9000
Current(A): 0.5000
Power (W): 16.9500
PF: 0.0000
Ballast type: DC
Width(mm): 70
Height(mm): 0

Photometric Results

Lumens(lm): 1664.57
Efficiency(%): 74.11%
Lumens(lm)/Power(W): 99.38
Central intensity(cd): 3589.265
Maximum intensity(cd): 3589.265
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=35.6
 [C90/270]Total=35.6
Field angle(10%Imax): [C0/180]Total=65.0
 [C90/270]Total=65.0
Maximum s/h(1/2): C0_180=0.59 C90_270=0.59
Maximum s/h(1/4): C0_180=0.58 C90_270=0.58
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 75.00%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.458%

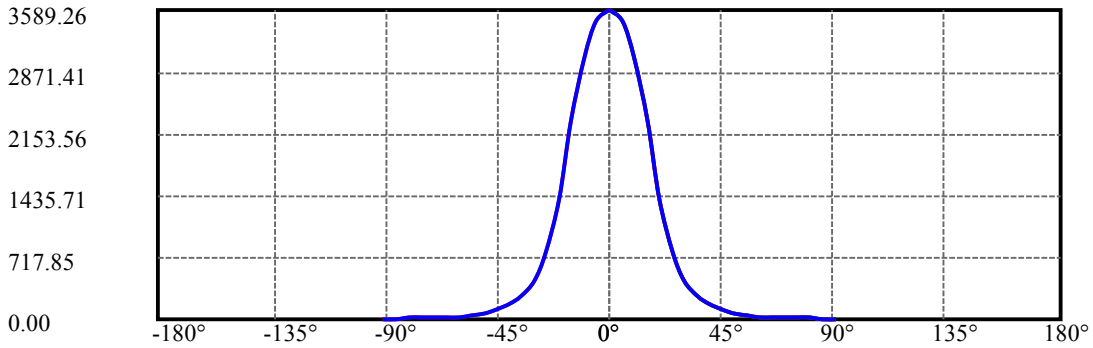
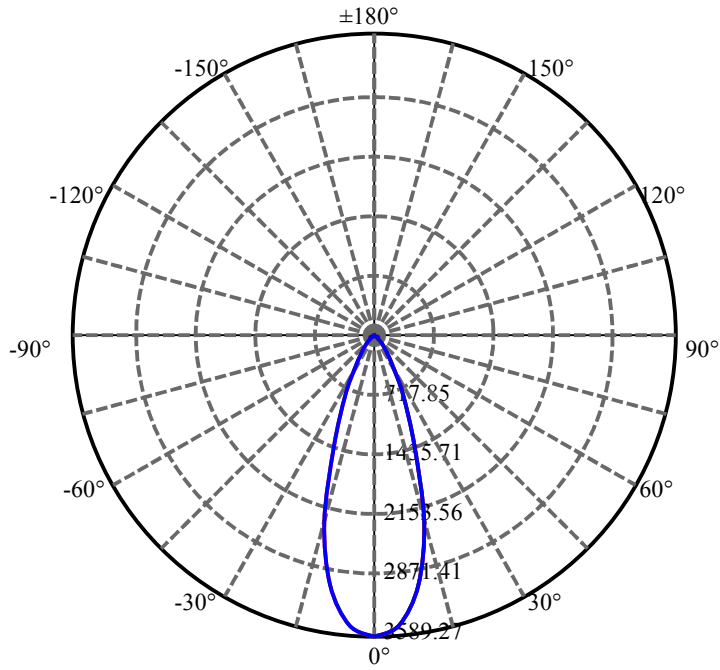
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3589.264	21.465	21.465	.956%	1.289%
5.0	3457.198	165.162	186.626	7.354%	11.212%
10.0	3025.418	287.969	474.595	12.821%	28.512%
15.0	2287.043	324.459	799.054	14.446%	48.004%
20.0	1401.330	262.713	1061.767	11.697%	63.786%
25.0	790.369	183.091	1244.858	8.152%	74.786%
30.0	442.736	121.340	1366.198	5.402%	82.075%
35.0	274.160	86.196	1452.394	3.838%	87.253%
40.0	180.151	63.474	1515.868	2.826%	91.067%
45.0	112.535	43.618	1559.485	1.942%	93.687%
50.0	72.544	30.461	1589.946	1.356%	95.517%
55.0	45.821	20.574	1610.52	.916%	96.753%
60.0	30.047	14.263	1624.784	.635%	97.610%
65.0	20.832	10.349	1635.133	.461%	98.232%
70.0	17.150	8.834	1643.966	.393%	98.762%
75.0	14.191	7.513	1651.48	.335%	99.214%
80.0	11.541	6.230	1657.71	.277%	99.588%
85.0	8.981	4.904	1662.614	.218%	99.882%
90.0	7.137	1.956	1664.57	.087%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1366.20	60.83%	82.08%
0-40	1515.87	67.49%	91.07%
0-60	1624.78	72.34%	97.61%
0-90	1662.61	74.03%	99.88%
0-120	1662.61	74.03%	99.88%
0-180	1664.57	74.11%	100.00%
60-90	52.09	2.32%	3.13%
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%
0-28.58	1331.66	59.29%	80.00%

ZONAL LUMEN SUMMARY

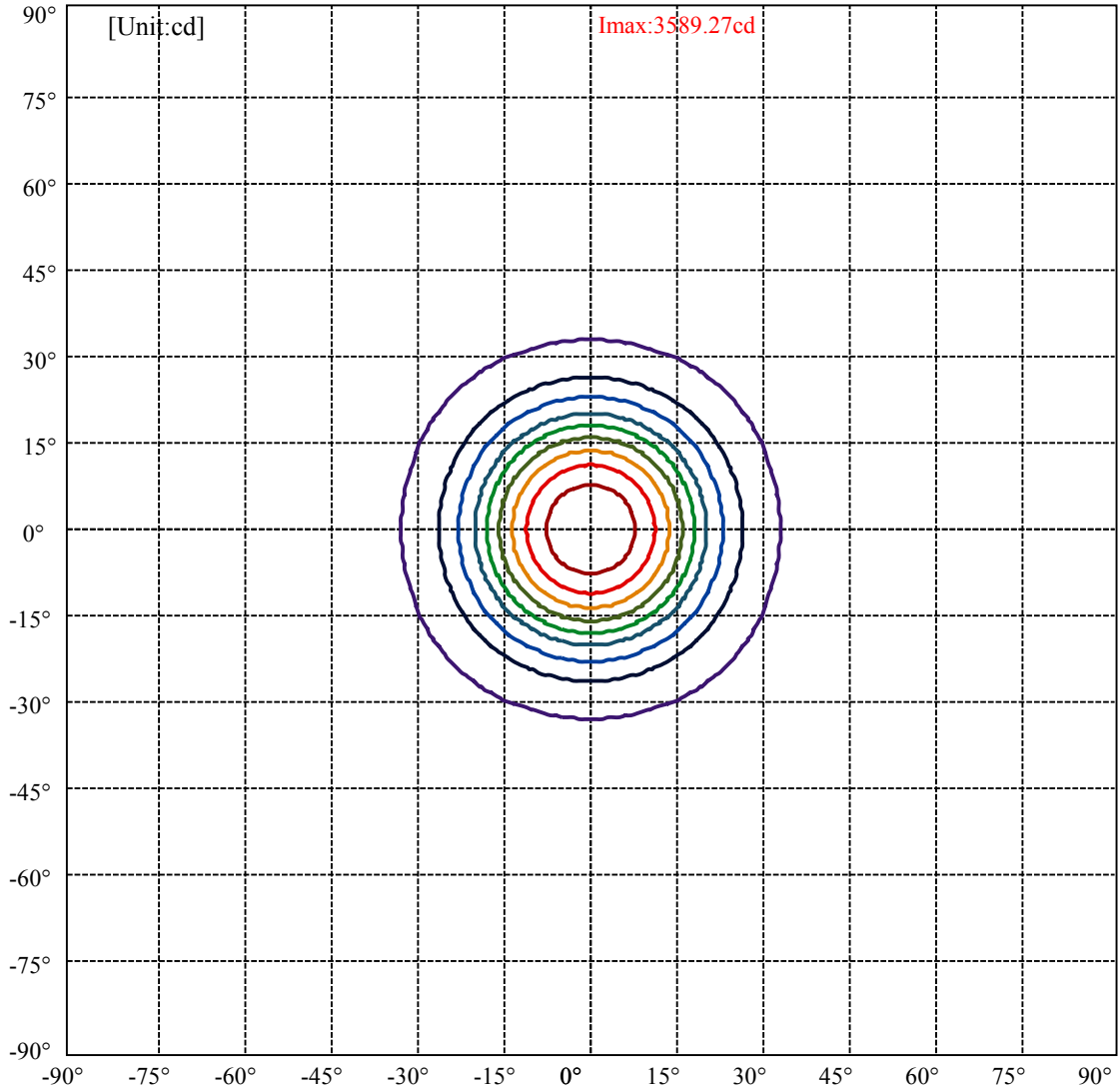
0-10	474.59
10-20	587.17
20-30	304.43
30-40	149.67
40-50	74.08
50-60	34.84
60-70	19.18
70-80	13.74
80-90	4.90
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



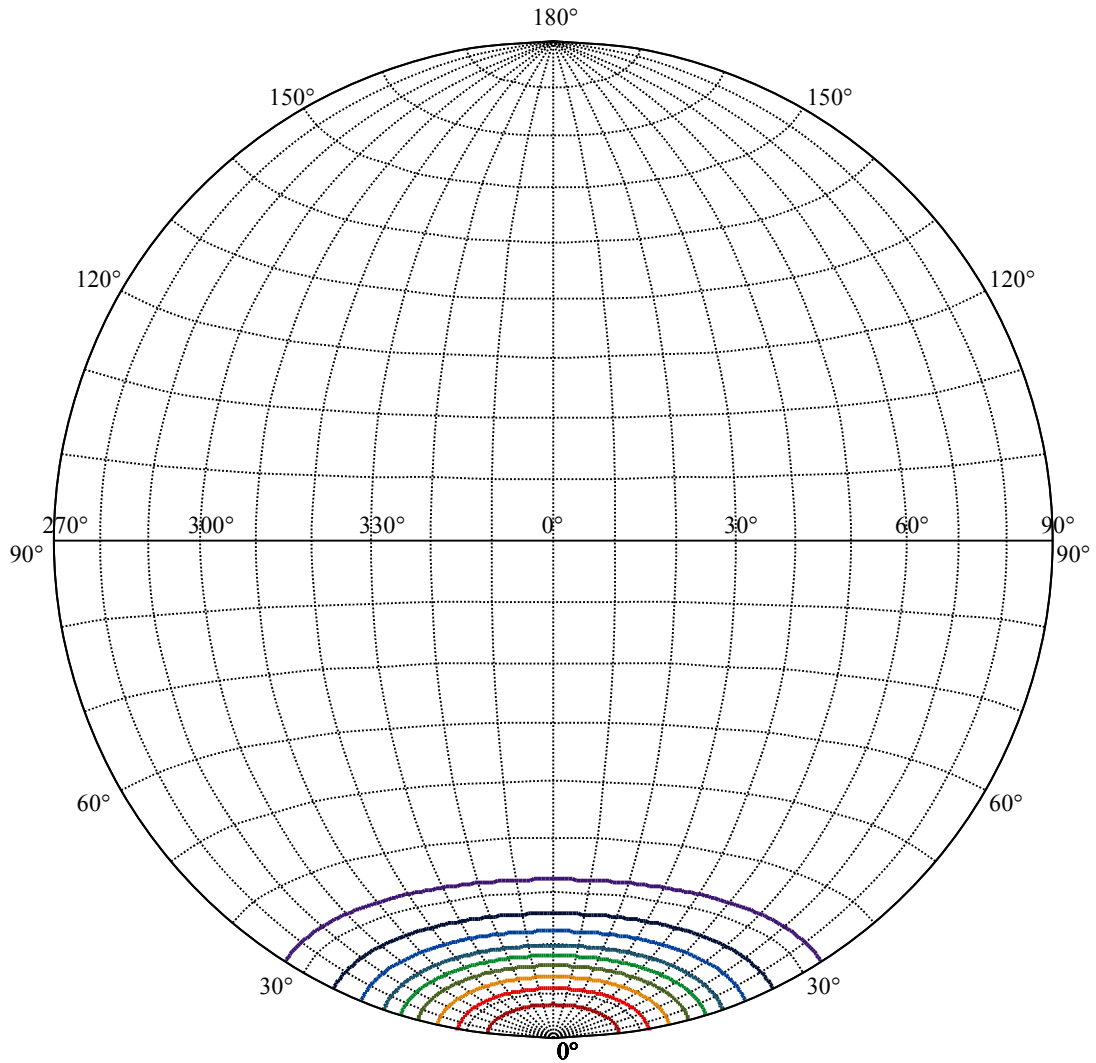
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:32.5 Right:32.5
:C90/270Left:32.5 Right:32.5

Beam Angle(50%Imax):C0/180Left:17.8 Right:17.8
:C90/270Left:17.8 Right:17.8



(10%Imax) 358.926	—
(20%Imax) 717.853	—
(30%Imax) 1076.78	—
(40%Imax) 1435.71	—
(50%Imax) 1794.63	—
(60%Imax) 2153.56	—
(70%Imax) 2512.49	—
(80%Imax) 2871.41	—
(90%Imax) 3230.34	—



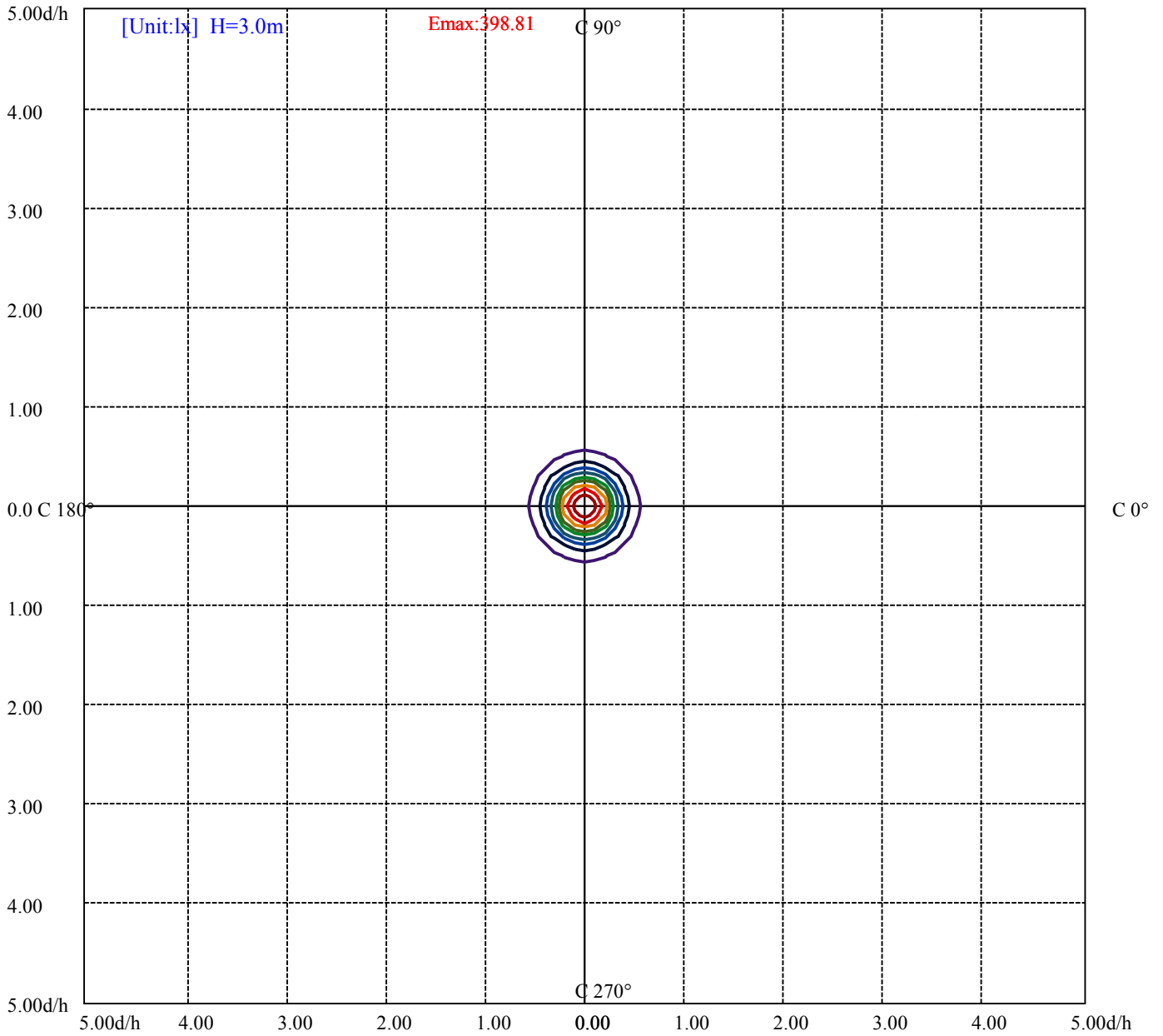
House

[Unit:cd]

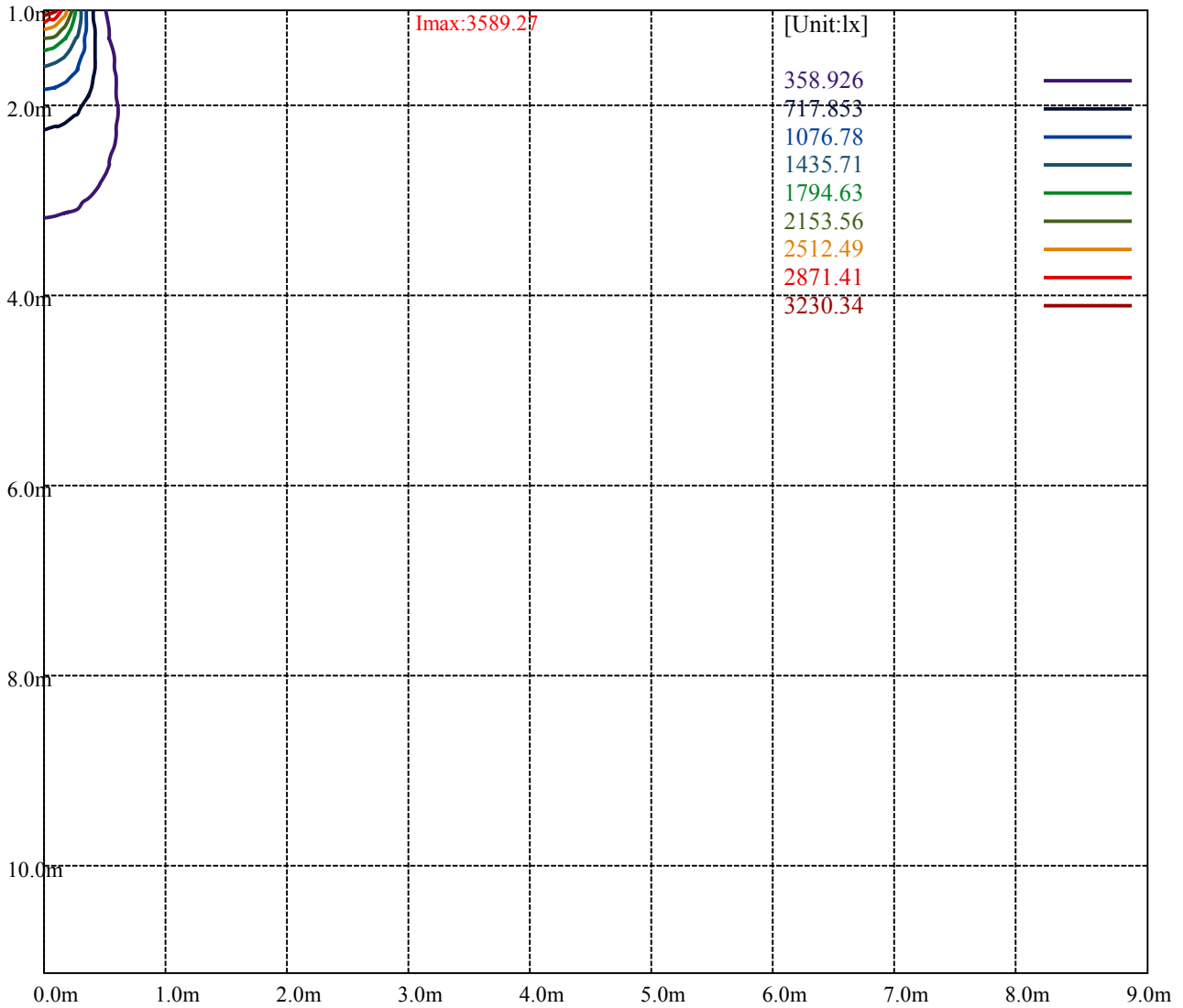
Road

Imax:3589.27

(10%Imax)	358.926	—
(20%Imax)	717.853	—
(30%Imax)	1076.78	—
(40%Imax)	1435.71	—
(50%Imax)	1794.63	—
(60%Imax)	2153.56	—
(70%Imax)	2512.49	—
(80%Imax)	2871.41	—
(90%Imax)	3230.34	—



- (10%E_{max}) 39.88066
- (20%E_{max}) 79.76133
- (30%E_{max}) 119.6422
- (40%E_{max}) 159.5222
- (50%E_{max}) 199.4033
- (60%E_{max}) 239.2845
- (70%E_{max}) 279.1644
- (80%E_{max}) 319.0455
- (90%E_{max}) 358.9256



Luminance Table

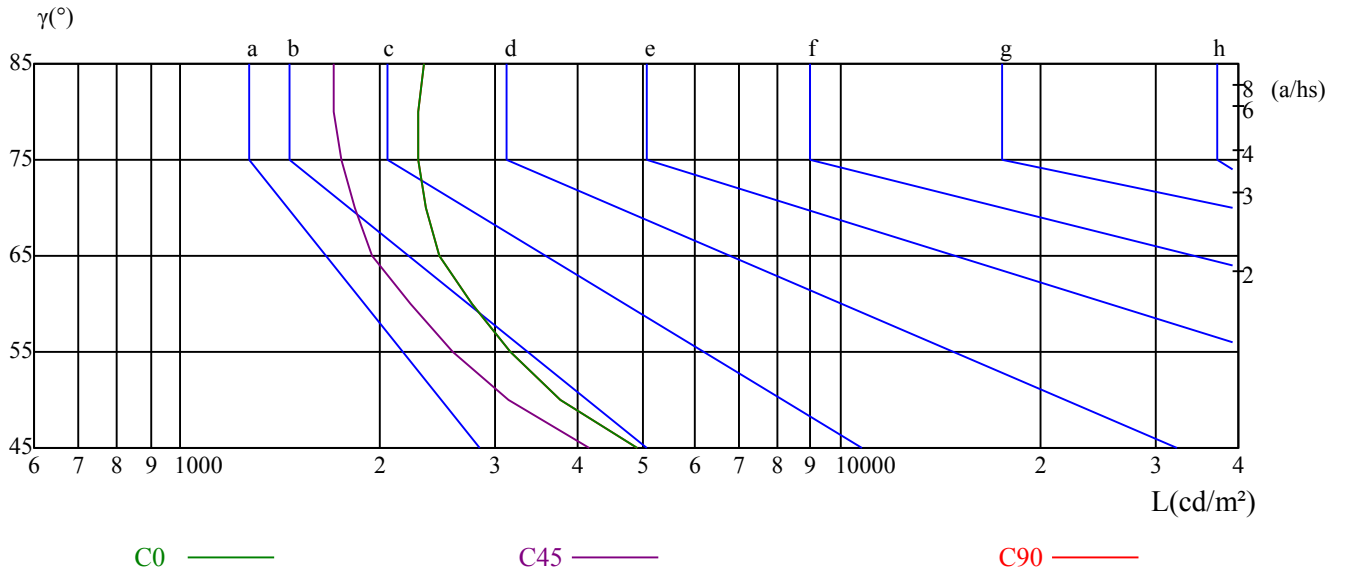
γ	45	50	55	60	65	70	75	80	85
C0	4917	3770	3151	2759	2462	2351	2291	2290	2335
C45	4161	3142	2586	2228	1955	1832	1750	1711	1701
C90	4917	3770	3151	2759	2462	2351	2291	2290	2335

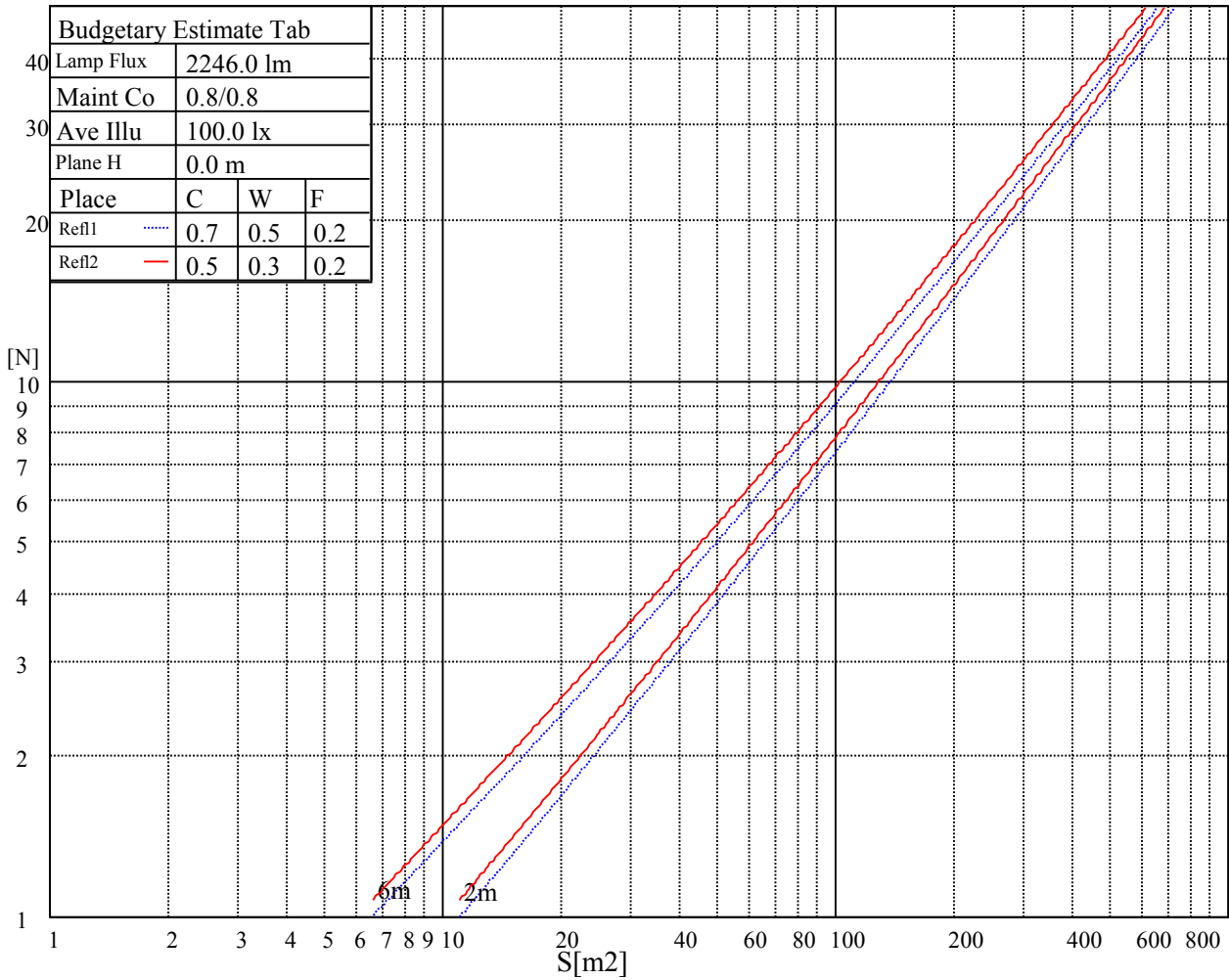
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6594	6594	6594	8981	8981	8981	23219	23219	23219

Glare Table

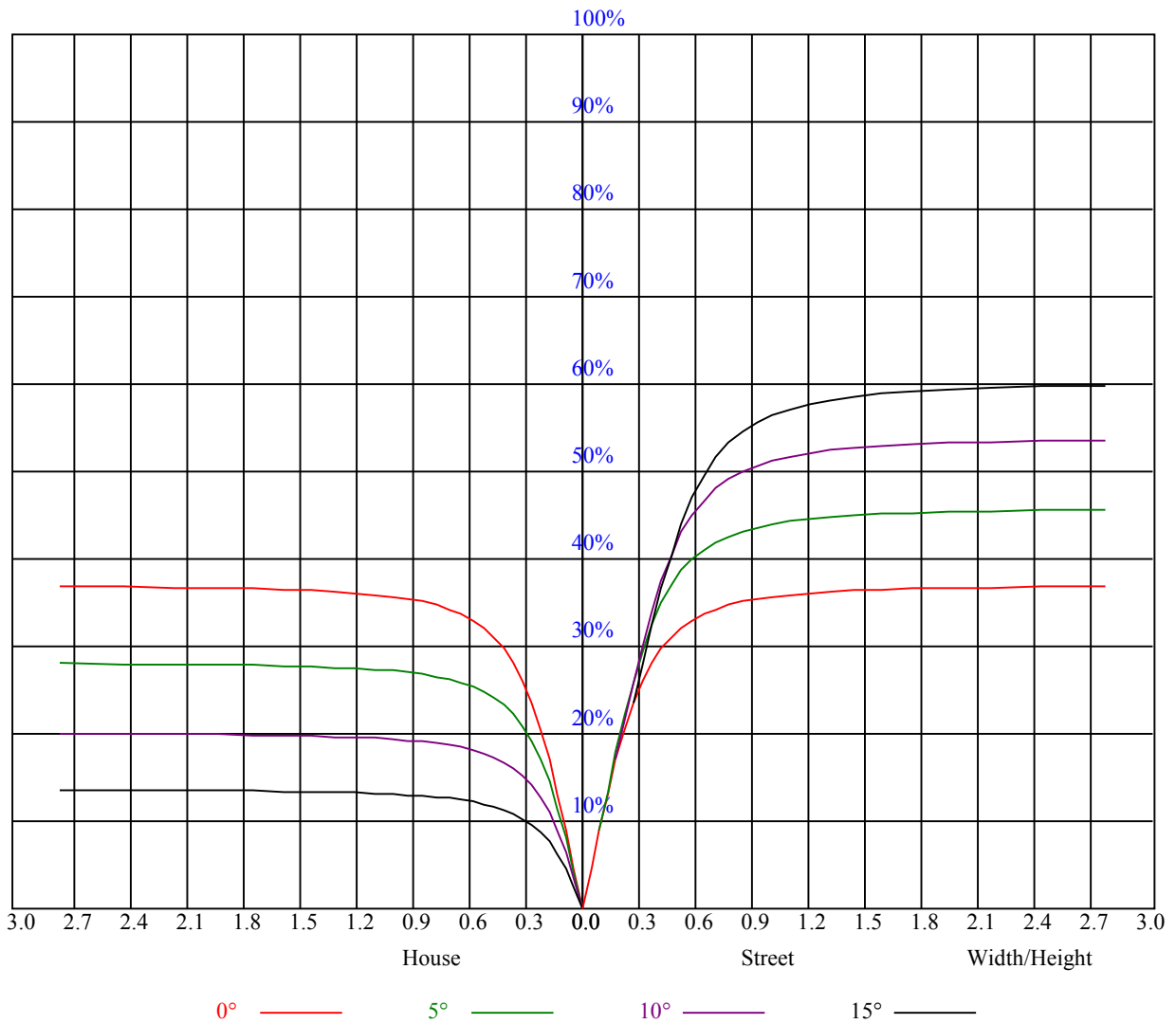
Glare	Quality	Service Values Illuminance(lx)							
		a	b	c	d	e	f	g	h
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.89	0.89	0.89	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.77	0.77	0.77	0.75
1	0.82	0.80	0.78	0.81	0.79	0.77	0.78	0.76	0.75	0.75	0.74	0.73	0.72	0.71	0.70	0.69
2	0.77	0.74	0.72	0.76	0.73	0.71	0.74	0.71	0.69	0.71	0.70	0.68	0.69	0.68	0.67	0.65
3	0.73	0.70	0.67	0.72	0.69	0.66	0.70	0.67	0.65	0.68	0.66	0.64	0.67	0.65	0.63	0.62
4	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.61	0.65	0.63	0.61	0.64	0.62	0.60	0.59
5	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.58	0.63	0.60	0.58	0.62	0.59	0.57	0.56
6	0.63	0.59	0.56	0.62	0.59	0.56	0.61	0.58	0.56	0.60	0.57	0.55	0.59	0.57	0.55	0.54
7	0.60	0.56	0.54	0.60	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.52
8	0.58	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.55	0.53	0.51	0.50
9	0.56	0.52	0.49	0.55	0.52	0.49	0.55	0.51	0.49	0.54	0.51	0.49	0.54	0.51	0.49	0.48
10	0.54	0.50	0.48	0.53	0.50	0.48	0.53	0.50	0.47	0.52	0.49	0.47	0.52	0.49	0.47	0.46



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	3590.23	3439.37	2979.10	2231.44	1408.34	758.13	419.53	284.09	176.46
45.0	3587.48	3459.19	3035.81	2300.81	1510.20	789.51	427.79	280.24	182.40
90.0	3594.63	3448.73	2935.06	2154.91	1072.94	713.15	397.01	253.04	170.67
135.0	3584.72	3509.29	3139.32	2414.77	1566.35	879.80	477.89	290.15	195.29
180.0	3590.23	3483.42	3059.48	2350.91	1508.55	807.46	465.67	284.75	188.35
225.0	3587.48	3442.68	3012.14	2246.85	1462.85	770.40	430.49	268.40	177.28
270.0	3594.63	3477.91	3099.12	2426.34	1608.75	864.94	513.13	286.84	188.24
315.0	3584.72	3396.98	2943.32	2170.32	1072.66	739.57	410.39	245.77	162.53
360.0	3590.23	3439.37	2979.10	2231.44	1408.34	758.13	419.53	284.09	176.46
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	110.50	71.46	46.58	30.56	20.98	17.62	14.37	11.67	8.97
45.0	111.54	73.28	46.08	30.28	21.14	17.29	14.31	11.62	9.08
90.0	104.22	66.45	42.50	27.86	19.93	16.74	13.82	11.23	8.81
135.0	121.34	76.53	47.35	31.55	21.03	17.23	14.48	11.62	9.03
180.0	116.61	75.54	46.69	29.57	20.92	17.12	14.04	11.45	8.92
225.0	110.28	71.24	44.76	29.12	20.54	16.79	13.87	11.23	8.81
270.0	120.13	76.97	48.50	31.82	21.53	17.51	14.48	12.06	9.19
315.0	105.65	68.88	44.10	29.62	20.59	16.90	14.15	11.45	9.03
360.0	110.50	71.46	46.58	30.56	20.98	17.62	14.37	11.67	8.97
C/ γ (°)	90.0								
0.0	7.10								
45.0	7.10								
90.0	7.16								
135.0	7.16								
180.0	7.16								
225.0	7.10								
270.0	7.16								
315.0	7.16								
360.0	7.10								