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## Nata

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LumCAT: 1-1062-N	
Luminaire: 92.70.361.000	
Report No: 220518-B014	Voltage(V): 37.7200
Test No: 220518-C014	Current(A): 0.3600
LampCAT: CREE CXA1512	Power (W): 13.5790
Lamp flux(lm): 1623.7	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1380.84  
Efficiency(%): 85.04%  
Lumens(lm)/Power(W): 101.69  
Central intensity(cd): 3576.809  
Maximum intensity(cd): 3576.809  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=34.6  
                                  [C90/270]Total=34.6  
Field angle(10%Imax): [C0/180]Total=58.5  
                                  [C90/270]Total=58.5  
Maximum s/h(1/2): C0\_180=0.57 C90\_270=0.57  
Maximum s/h(1/4): C0\_180=0.57 C90\_270=0.57  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 85.04%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 98.111%

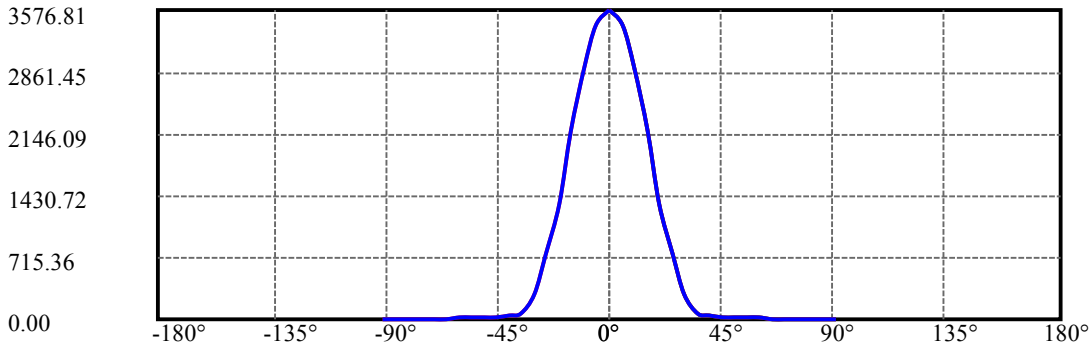
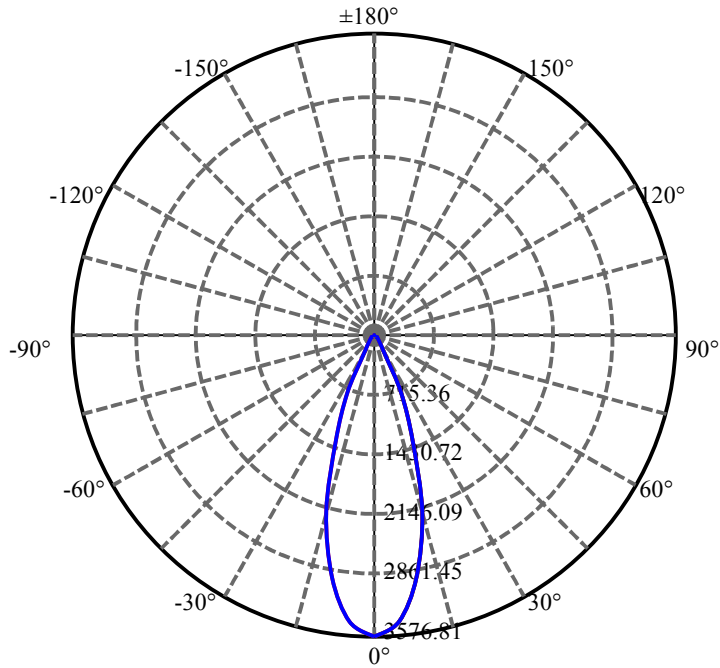
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3576.809	0.000	0	.000%	.000%
5.0	3406.886	83.488	83.488	5.142%	6.046%
10.0	2915.419	226.169	309.657	13.929%	22.425%
15.0	2180.309	302.275	611.932	18.616%	44.316%
20.0	1327.777	289.116	901.047	17.806%	65.253%
25.0	748.360	217.748	1118.796	13.410%	81.023%
30.0	286.575	130.972	1249.768	8.066%	90.508%
35.0	60.567	51.119	1300.887	3.148%	94.210%
40.0	38.451	16.520	1317.407	1.017%	95.406%
45.0	27.486	12.209	1329.616	.752%	96.290%
50.0	21.414	9.881	1339.497	.609%	97.006%
55.0	16.791	8.307	1347.804	.512%	97.607%
60.0	13.302	6.956	1354.76	.428%	98.111%
65.0	10.673	5.829	1360.589	.359%	98.533%
70.0	8.985	4.978	1365.566	.307%	98.894%
75.0	7.783	4.383	1369.949	.270%	99.211%
80.0	6.984	3.951	1373.9	.243%	99.497%
85.0	6.311	3.613	1377.513	.222%	99.759%
90.0	5.856	3.331	1380.844	.205%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1249.77	76.97%	90.51%
0-40	1317.41	81.13%	95.41%
0-60	1354.76	83.44%	98.11%
0-90	1377.51	84.84%	99.76%
0-120	1377.51	84.84%	99.76%
0-180	1380.84	85.04%	100.00%
60-90	29.71	1.83%	2.15%
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%
0-24.68	1104.68	68.03%	80.00%

ZONAL LUMEN SUMMARY

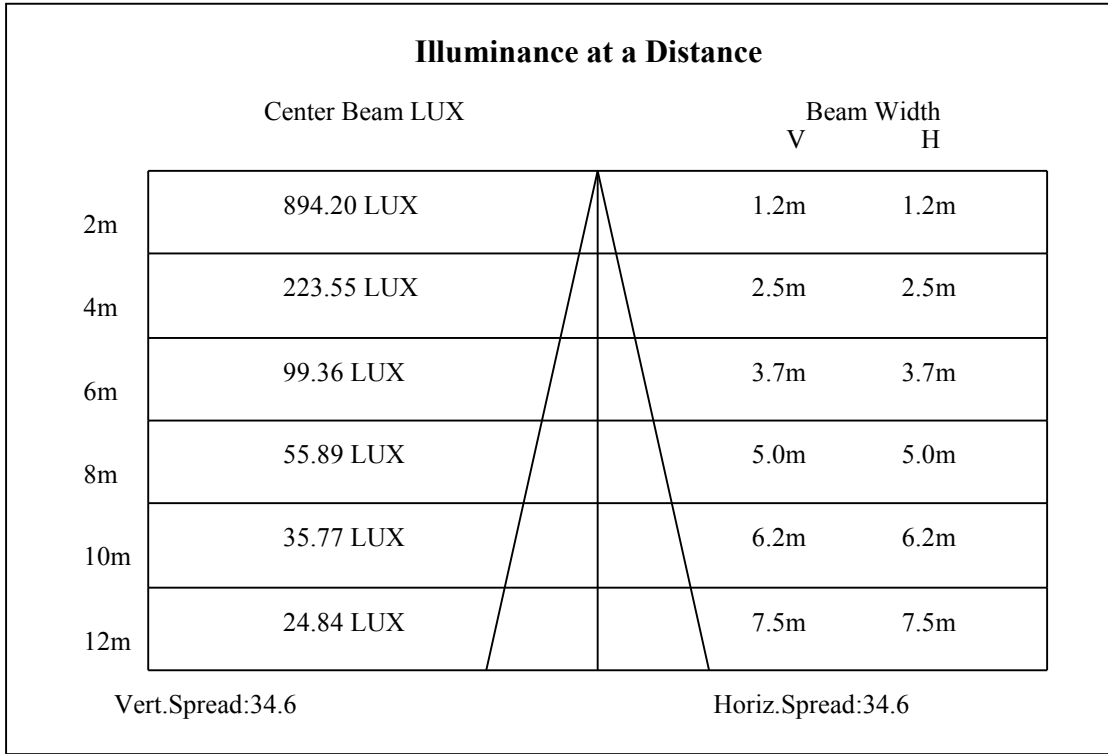
0-10	309.66
10-20	591.39
20-30	348.72
30-40	67.64
40-50	22.09
50-60	15.26
60-70	10.81
70-80	8.33
80-90	3.61
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

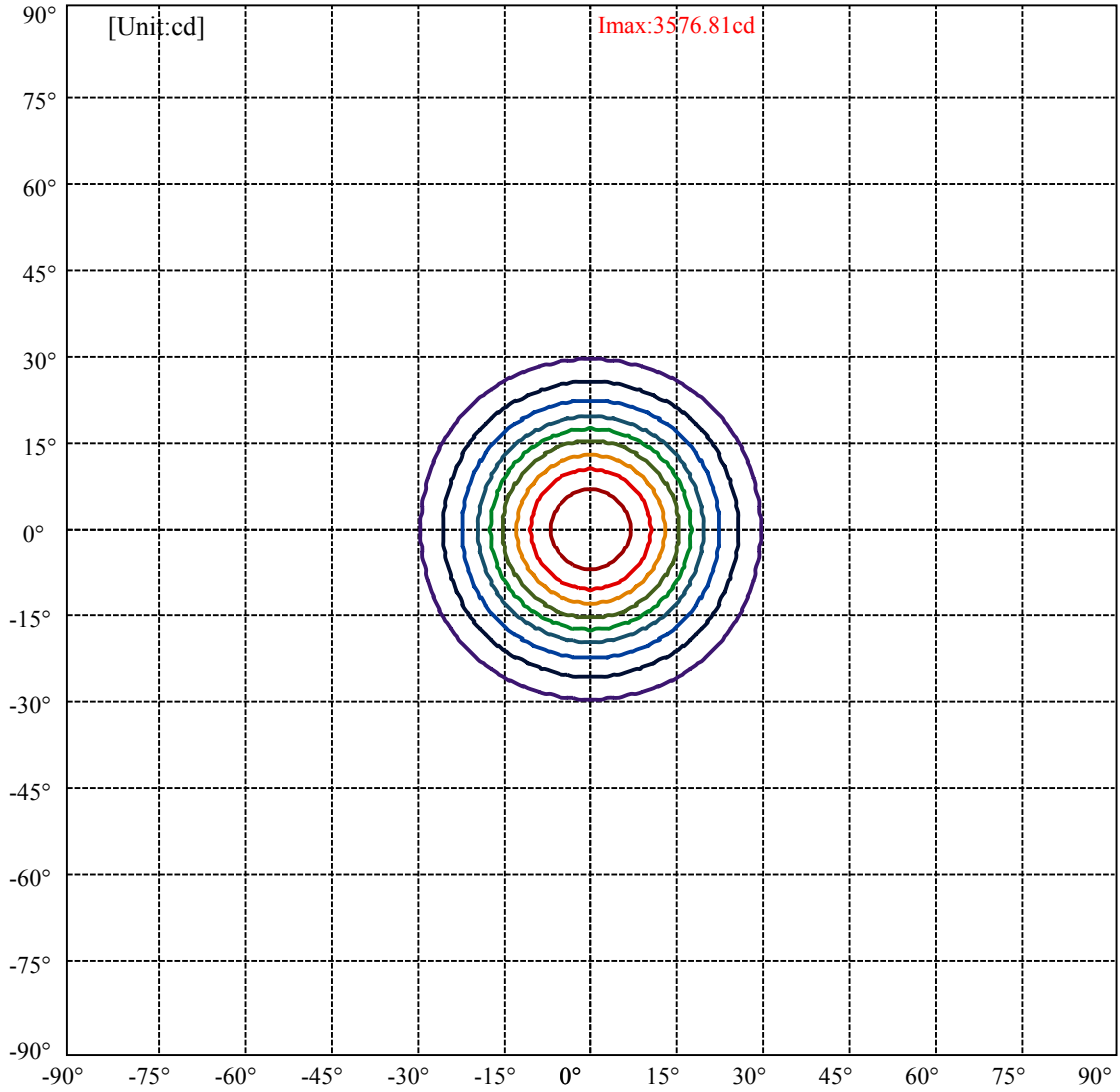


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

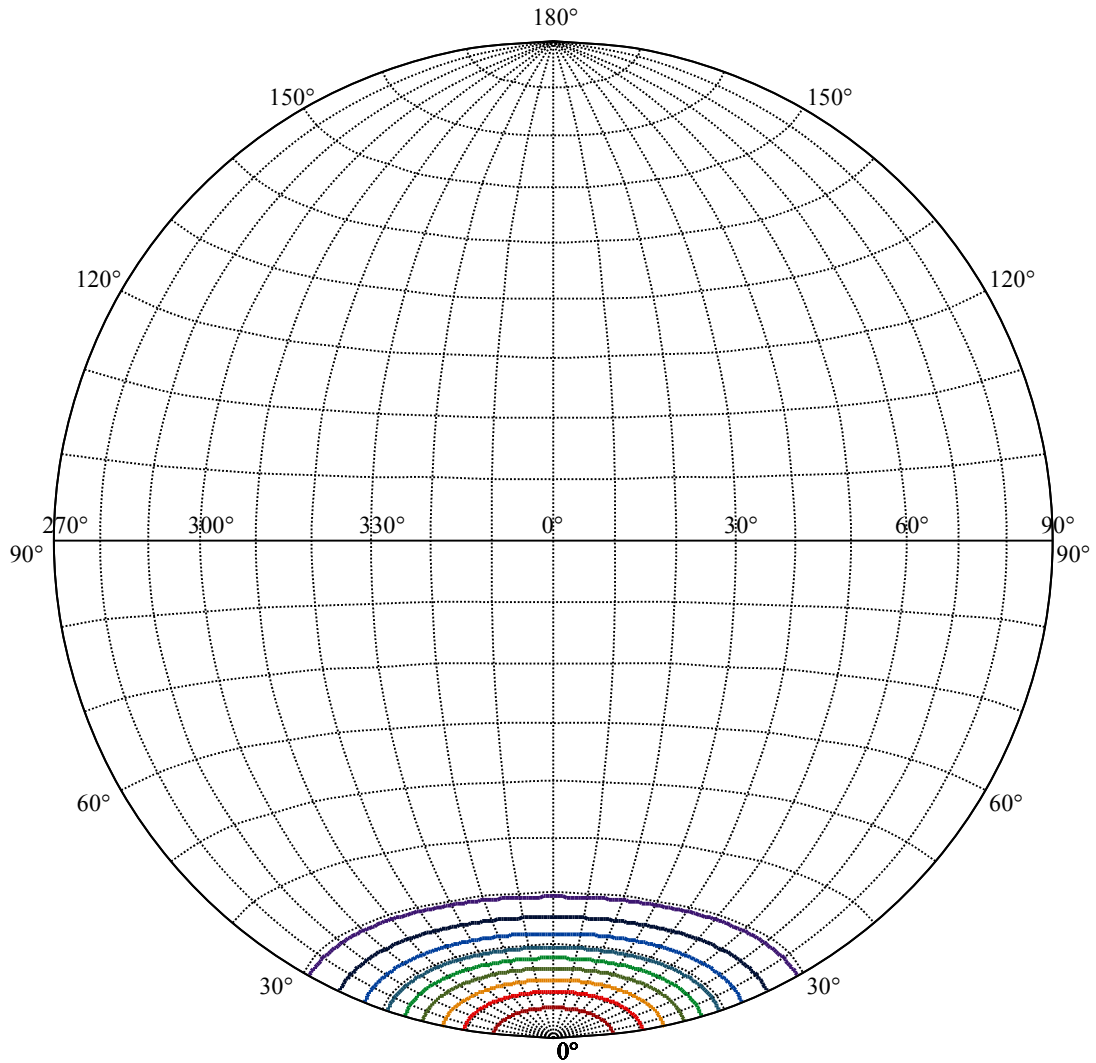
Field angle(10%Imax):C0/180Left:29.2 Right:29.2  
:C90/270Left:29.2 Right:29.2

Beam Angle(50%Imax):C0/180Left:17.3 Right:17.3  
:C90/270Left:17.3 Right:17.3





(10%Imax) 357.681	—
(20%Imax) 715.362	—
(30%Imax) 1073.04	—
(40%Imax) 1430.72	—
(50%Imax) 1788.4	—
(60%Imax) 2146.09	—
(70%Imax) 2503.77	—
(80%Imax) 2861.45	—
(90%Imax) 3219.13	—



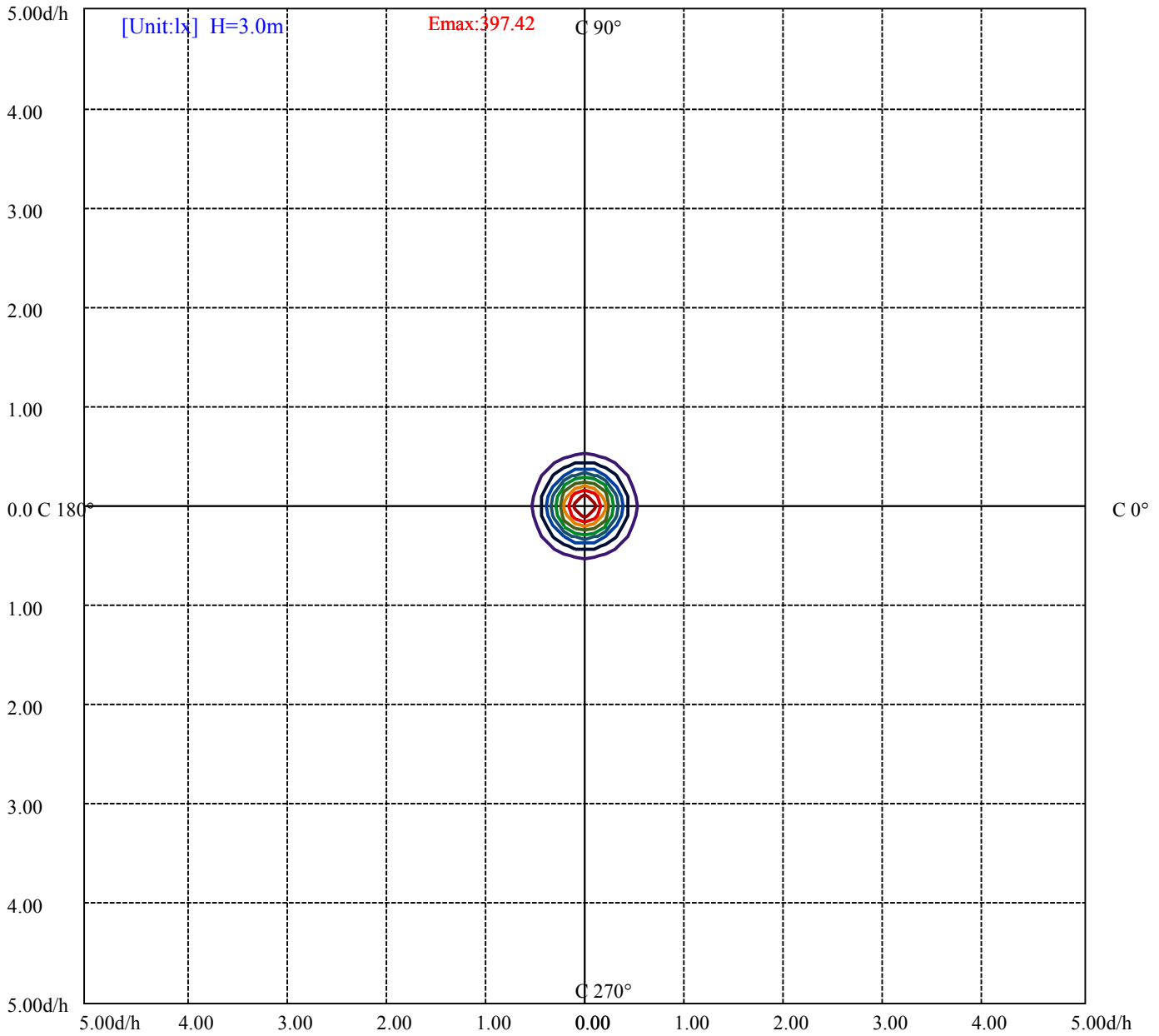
House

[Unit:cd]

Road

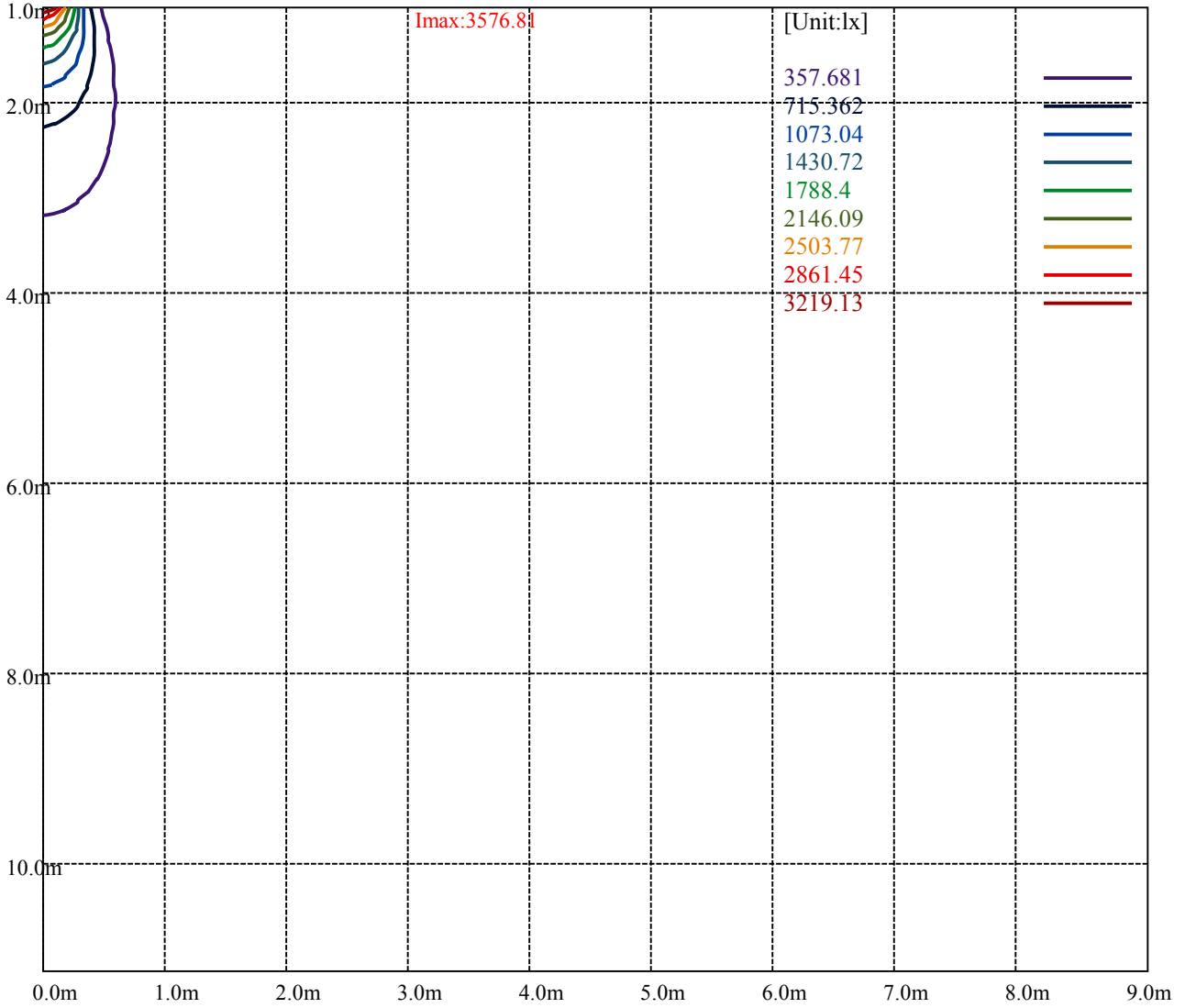
**Imax:3576.81**

(10%Imax)	357.681	—
(20%Imax)	715.362	—
(30%Imax)	1073.04	—
(40%Imax)	1430.72	—
(50%Imax)	1788.4	—
(60%Imax)	2146.09	—
(70%Imax)	2503.77	—
(80%Imax)	2861.45	—
(90%Imax)	3219.13	—



- (10%Emax) 39.74222
- (20%Emax) 79.48456
- (30%Emax) 119.2267
- (40%Emax) 158.9689
- (50%Emax) 198.7111
- (60%Emax) 238.4533
- (70%Emax) 278.1956
- (80%Emax) 317.9378
- (90%Emax) 357.68





Luminance Table

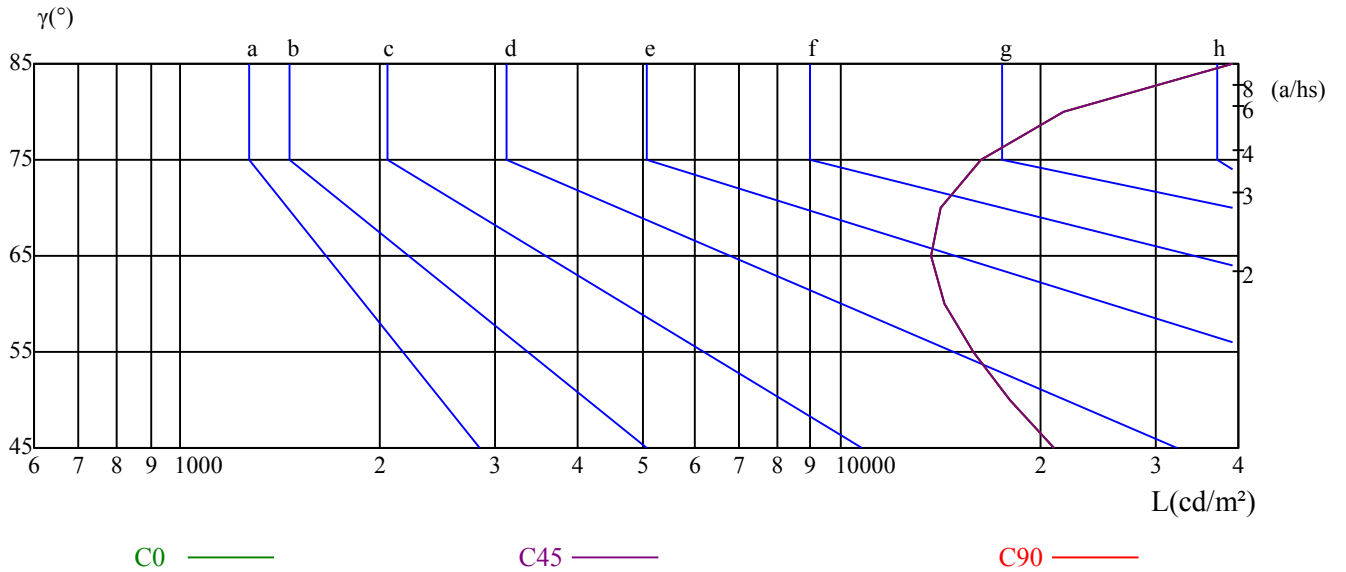
$\gamma$	45	50	55	60	65	70	75	80	85
C0	21023	18017	15832	14389	13659	14208	16263	21751	39165
C45	21023	18017	15832	14389	13659	14208	16263	21751	39165
C90	21023	18017	15832	14389	13659	14208	16263	21751	39165

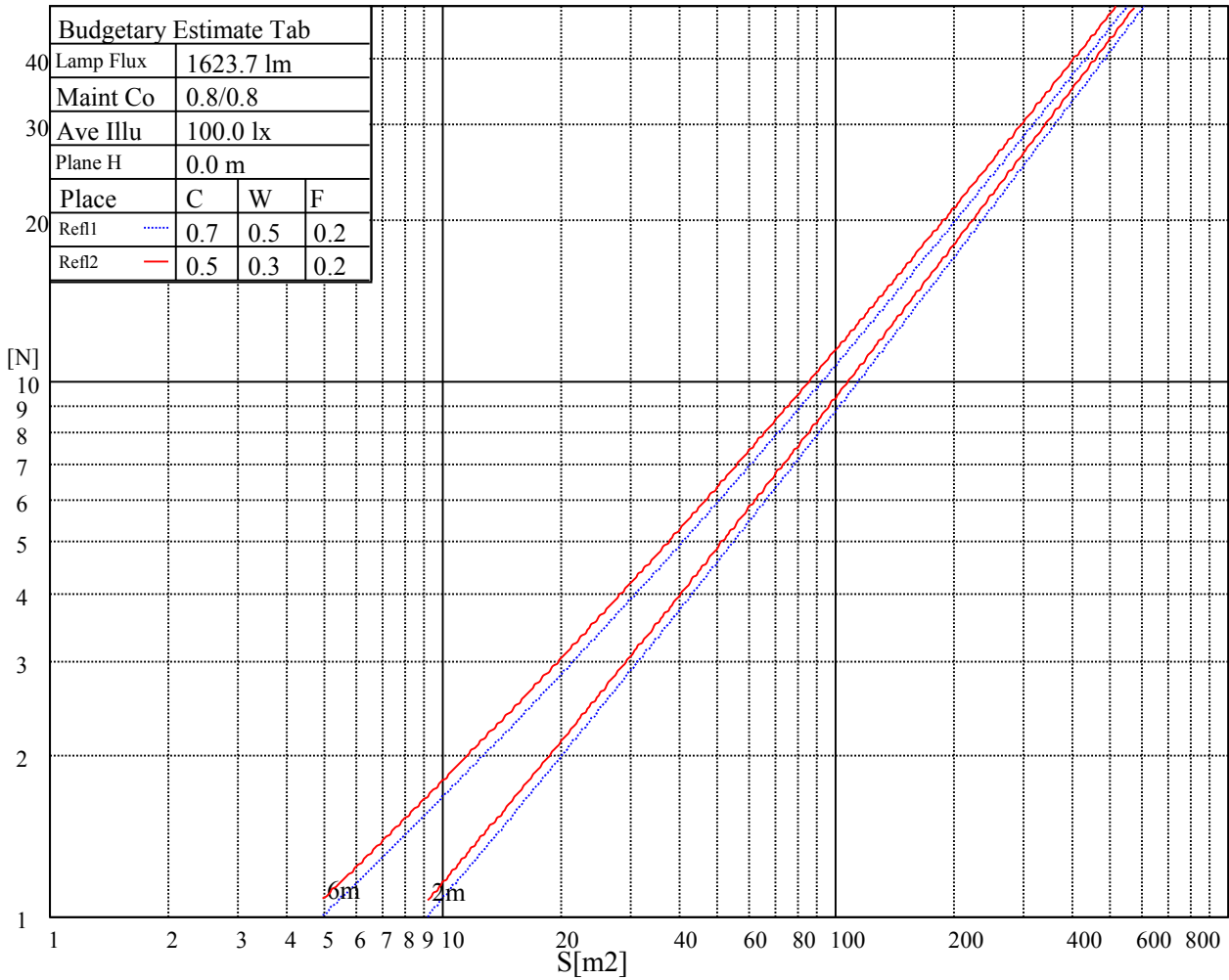
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
13659	13659	13659	16263	16263	16263	39165	39165	39165

Glare Table

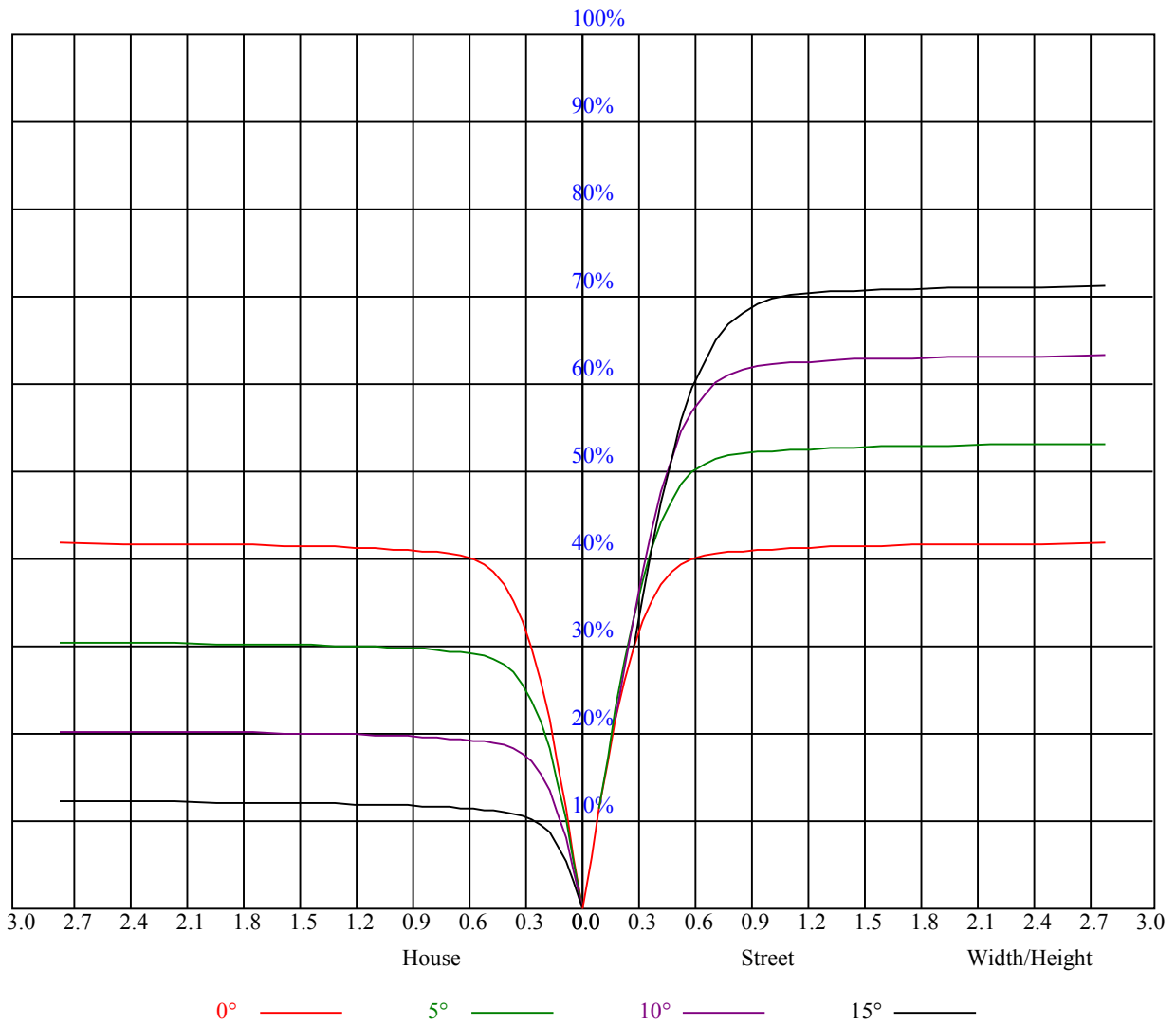
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.87	0.87	0.87	0.85
1	0.95	0.93	0.91	0.93	0.91	0.90	0.90	0.88	0.87	0.87	0.85	0.85	0.84	0.83	0.82	0.81
2	0.90	0.87	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.83	0.81	0.80	0.81	0.79	0.78	0.77
3	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.80	0.77	0.75	0.78	0.76	0.74	0.73
4	0.81	0.77	0.74	0.80	0.76	0.73	0.78	0.75	0.73	0.76	0.74	0.72	0.75	0.73	0.71	0.70
5	0.77	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.69	0.74	0.71	0.68	0.72	0.70	0.68	0.67
6	0.74	0.70	0.67	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.64
7	0.71	0.66	0.64	0.70	0.66	0.63	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.62	0.61
8	0.68	0.64	0.61	0.67	0.63	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.65	0.62	0.60	0.59
9	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.63	0.60	0.58	0.57
10	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.56	0.55



Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3579.80	3463.88	3000.79	2353.07	1500.99	855.06	330.43	65.97	39.38
45.0	3578.00	3356.32	2835.28	2048.93	1237.48	668.63	309.52	52.70	36.03
90.0	3567.25	3298.36	2737.88	1930.62	1171.46	590.36	156.01	51.27	34.84
135.0	3582.19	3395.76	2918.93	2191.74	1376.11	728.39	308.92	59.16	39.02
180.0	3579.80	3330.63	2825.71	2043.55	1164.64	668.10	204.18	55.33	37.52
225.0	3578.00	3475.83	3006.77	2307.06	1384.47	822.98	344.12	70.39	42.31
270.0	3567.25	3505.11	3081.46	2411.03	1621.10	895.10	373.46	71.76	41.05
315.0	3582.19	3429.22	2916.54	2156.48	1165.96	758.26	265.96	57.96	37.47
360.0	3579.80	3463.88	3000.79	2353.07	1500.99	855.06	330.43	65.97	39.38
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	28.26	21.87	17.15	13.98	10.93	9.14	7.83	6.99	6.39
45.0	25.93	20.32	16.01	12.67	10.22	8.66	7.59	6.87	6.21
90.0	25.39	20.20	15.66	12.49	10.04	8.66	7.65	6.99	6.21
135.0	28.14	21.81	16.97	13.27	10.70	8.96	7.77	6.99	6.27
180.0	26.83	20.91	16.25	12.85	10.40	8.78	7.59	6.75	6.15
225.0	29.58	22.53	17.63	13.74	11.17	9.26	8.01	7.11	6.39
270.0	29.04	22.83	17.93	14.22	11.29	9.44	8.07	7.23	6.57
315.0	26.71	20.85	16.73	13.21	10.64	8.96	7.77	6.93	6.27
360.0	28.26	21.87	17.15	13.98	10.93	9.14	7.83	6.99	6.39
C/ $\gamma$ (°)	90.0								
0.0	5.80								
45.0	5.86								
90.0	5.86								
135.0	5.80								
180.0	5.74								
225.0	5.98								
270.0	5.98								
315.0	5.86								
360.0	5.80								