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Nata

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LumCAT: 1437-N  
Luminaire: 92.70.046.00+92.70.147.00  
Report No: NT2018011803  
Test No: nata-0100  
LampCAT: CREE CXA1520  
Lamp flux(lm): 1457.0  
Number of Lamps: 1  
Length(mm): 46  
Phm Type: C

Voltage(V): 37.9000  
Current(A): 0.3500  
Power (W): 13.2650  
PF: 0.0000  
Ballast type: DC  
Width(mm): 46  
Height(mm): 0

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Photometric Results

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Lumens(lm): 1125.06  
Efficiency(%): 77.22%  
Lumens(lm)/Power(W): 84.81  
Central intensity(cd): 2159.587  
Maximum intensity(cd): 2159.587  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=38.7  
                                  [C90/270]Total=38.7  
Field angle(10%Imax): [C0/180]Total=67.0  
                                  [C90/270]Total=67.0  
Maximum s/h(1/2): C0\_180=0.64 C90\_270=0.64  
Maximum s/h(1/4): C0\_180=0.61 C90\_270=0.61  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 78.03%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.417%

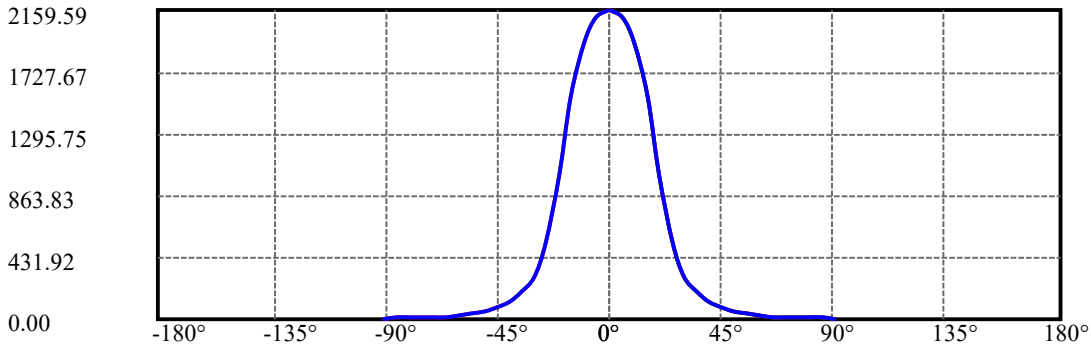
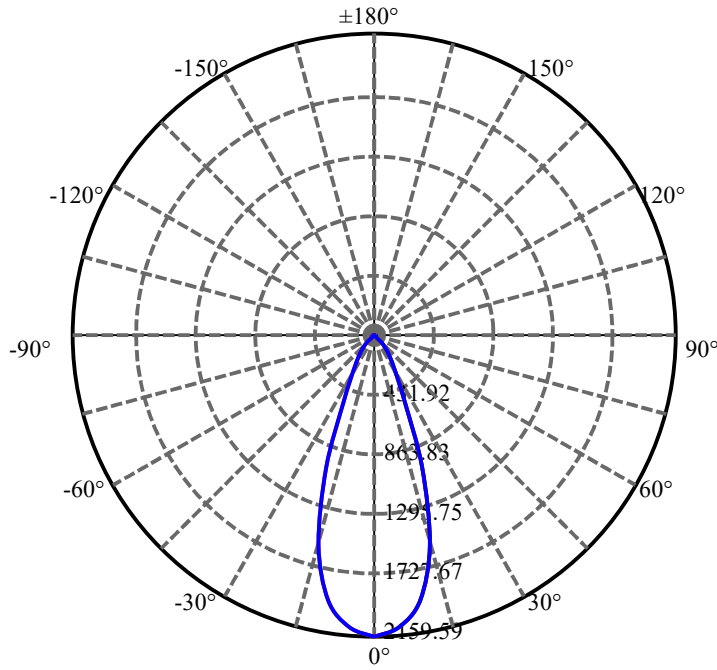
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2159.587	12.915	12.915	.886%	1.148%
5.0	2102.604	100.448	113.363	6.894%	10.076%
10.0	1930.140	183.717	297.08	12.609%	26.406%
15.0	1552.935	220.312	517.392	15.121%	45.988%
20.0	1011.462	189.623	707.015	13.015%	62.842%
25.0	533.724	123.639	830.653	8.486%	73.832%
30.0	295.371	80.952	911.605	5.556%	81.027%
35.0	181.865	57.178	968.783	3.924%	86.109%
40.0	124.207	43.763	1012.546	3.004%	89.999%
45.0	84.078	32.588	1045.134	2.237%	92.896%
50.0	57.789	24.265	1069.399	1.665%	95.053%
55.0	36.482	16.381	1085.78	1.124%	96.509%
60.0	21.885	10.389	1096.169	.713%	97.432%
65.0	13.454	6.684	1102.853	.459%	98.026%
70.0	10.929	5.629	1108.482	.386%	98.526%
75.0	9.841	5.211	1113.692	.358%	98.990%
80.0	9.490	5.123	1118.815	.352%	99.445%
85.0	8.864	4.840	1123.656	.332%	99.875%
90.0	5.127	1.405	1125.061	.096%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	911.61	62.57%	81.03%
0-40	1012.55	69.50%	90.00%
0-60	1096.17	75.23%	97.43%
0-90	1123.66	77.12%	99.88%
0-120	1123.66	77.12%	99.88%
0-180	1125.06	77.22%	100.00%
60-90	37.88	2.60%	3.37%
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%
0-29.29	900.05	61.77%	80.00%

ZONAL LUMEN SUMMARY

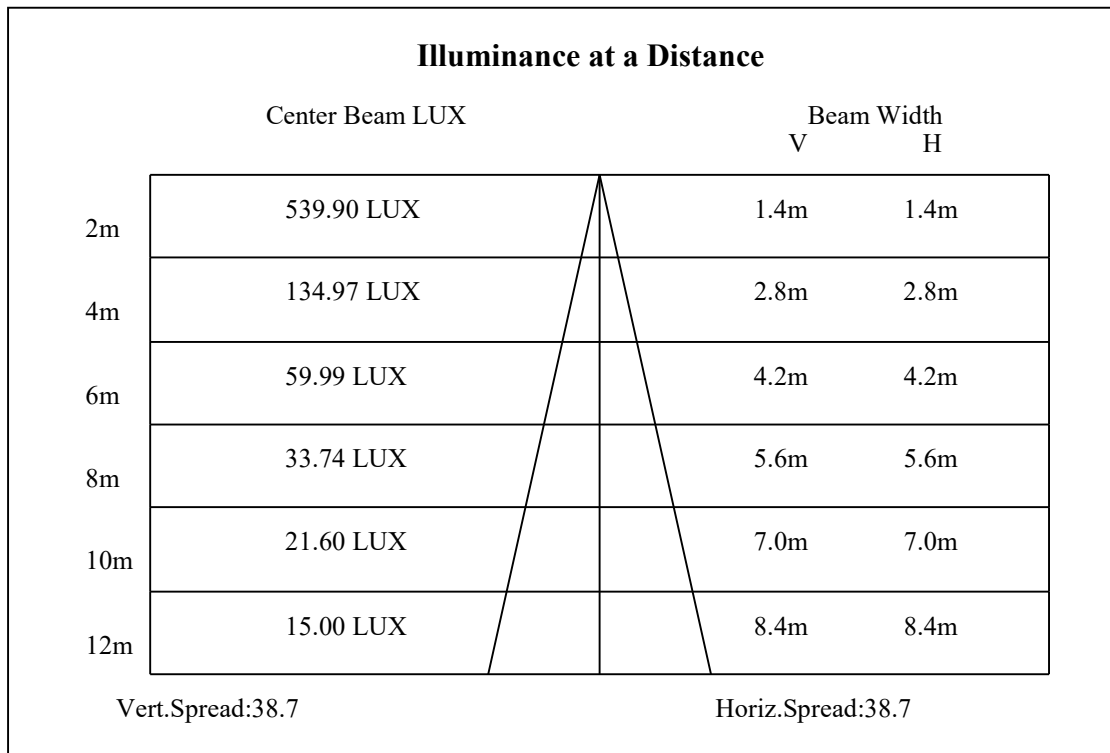
0-10	297.08
10-20	409.94
20-30	204.59
30-40	100.94
40-50	56.85
50-60	26.77
60-70	12.31
70-80	10.33
80-90	4.84
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

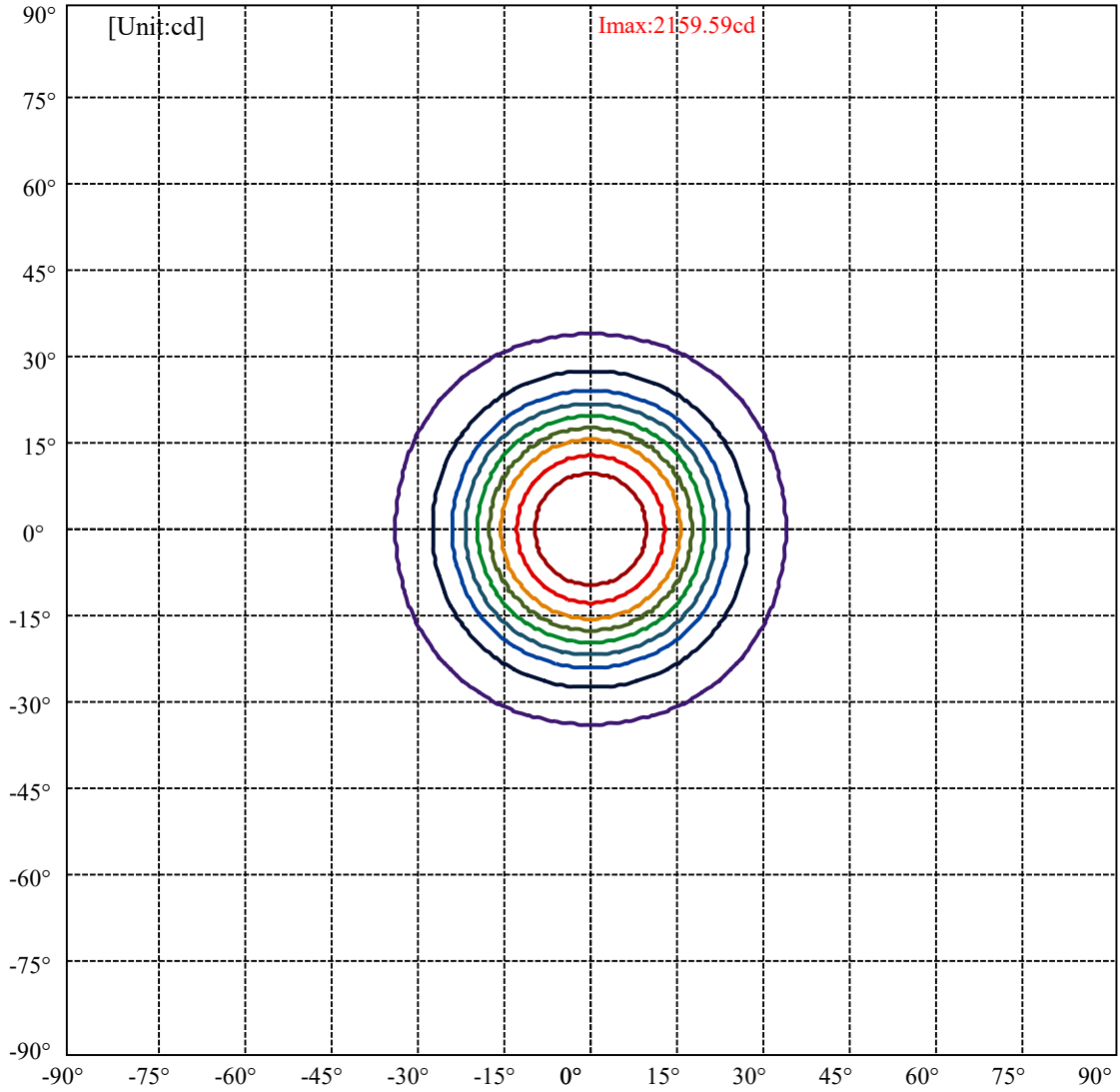


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

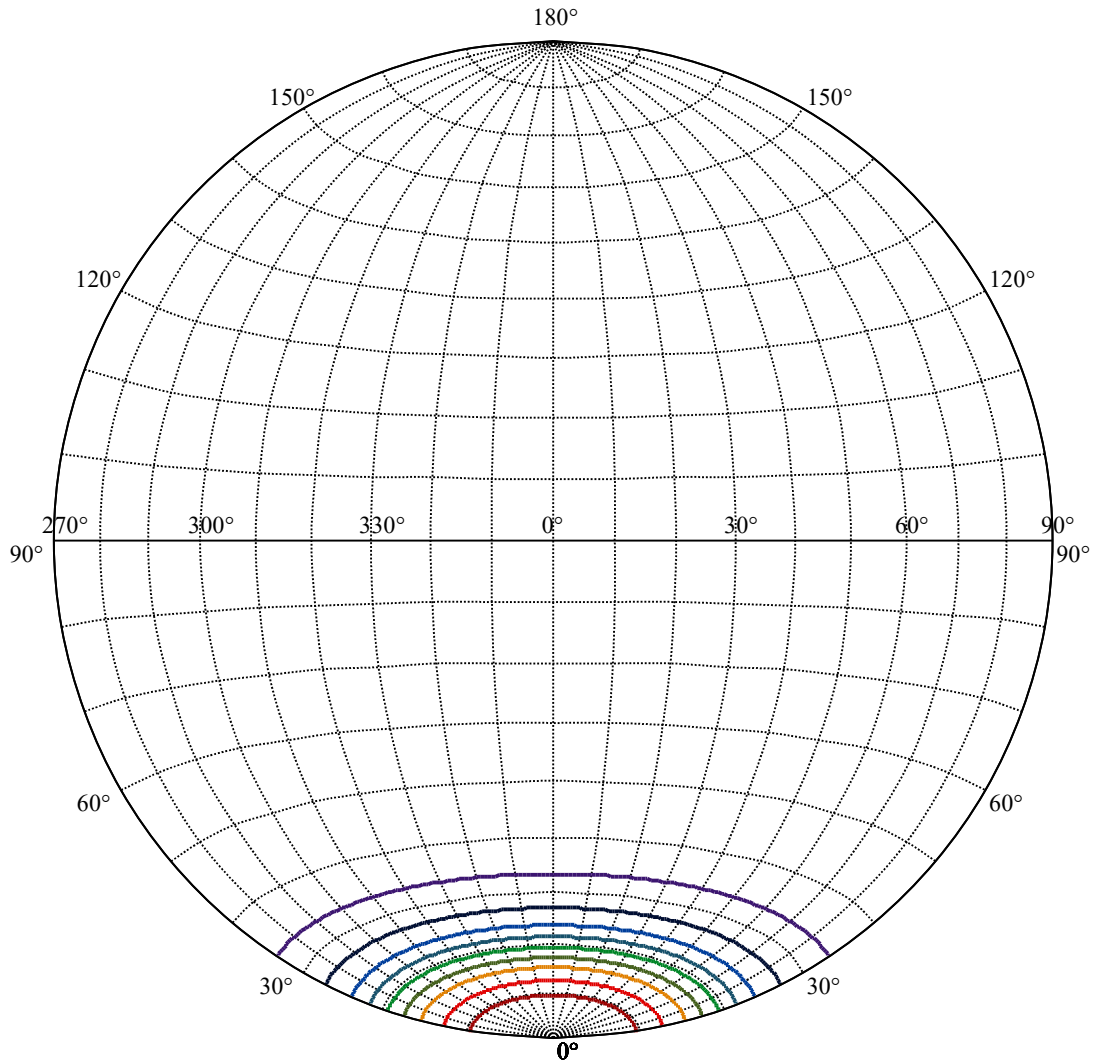
Field angle(10%Imax):C0/180Left:33.5 Right:33.5  
:C90/270Left:33.5 Right:33.5

Beam Angle(50%Imax):C0/180Left:19.4 Right:19.4  
:C90/270Left:19.4 Right:19.4





(10%Imax) 215.959	—
(20%Imax) 431.917	—
(30%Imax) 647.876	—
(40%Imax) 863.835	—
(50%Imax) 1079.79	—
(60%Imax) 1295.75	—
(70%Imax) 1511.71	—
(80%Imax) 1727.67	—
(90%Imax) 1943.63	—



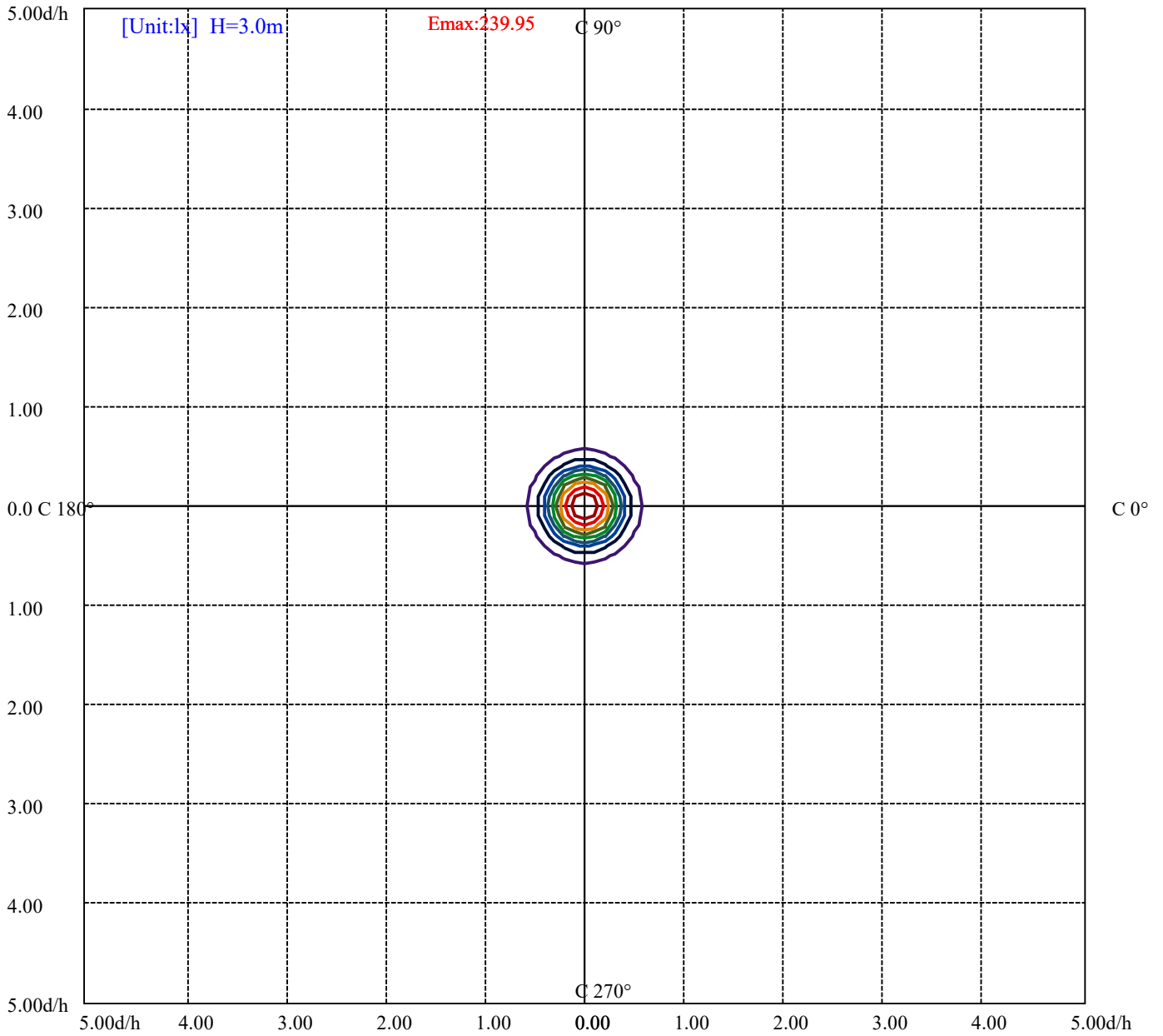
House

[Unit:cd]

Road

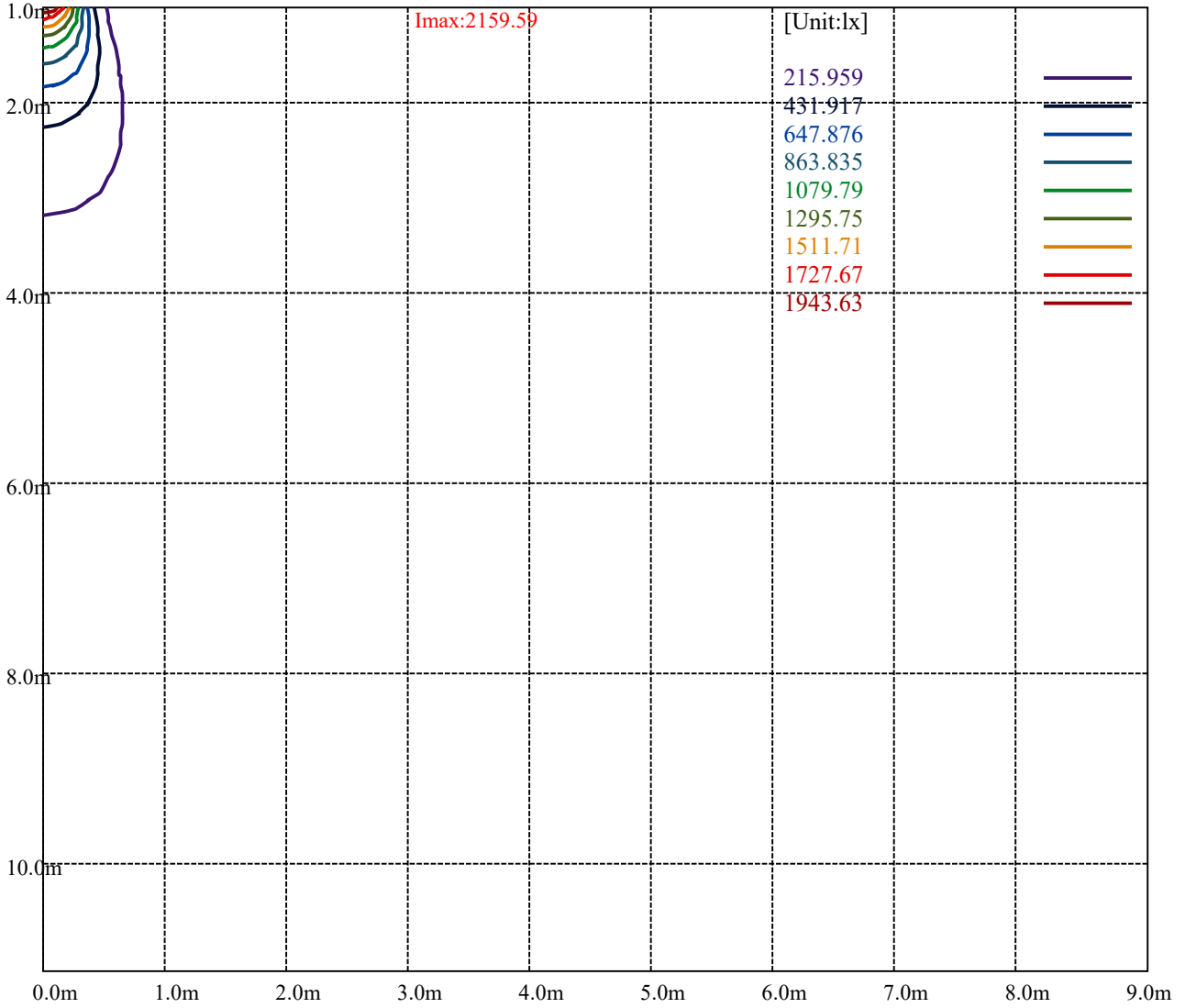
Imax:2159.59

(10%Imax)	215.959	—
(20%Imax)	431.917	—
(30%Imax)	647.876	—
(40%Imax)	863.835	—
(50%Imax)	1079.79	—
(60%Imax)	1295.75	—
(70%Imax)	1511.71	—
(80%Imax)	1727.67	—
(90%Imax)	1943.63	—



- (10%Emax) 23.99545
- (20%Emax) 47.99078
- (30%Emax) 71.98622
- (40%Emax) 95.98155
- (50%Emax) 119.9767
- (60%Emax) 143.9722
- (70%Emax) 167.9678
- (80%Emax) 191.9633
- (90%Emax) 215.9589





Luminance Table

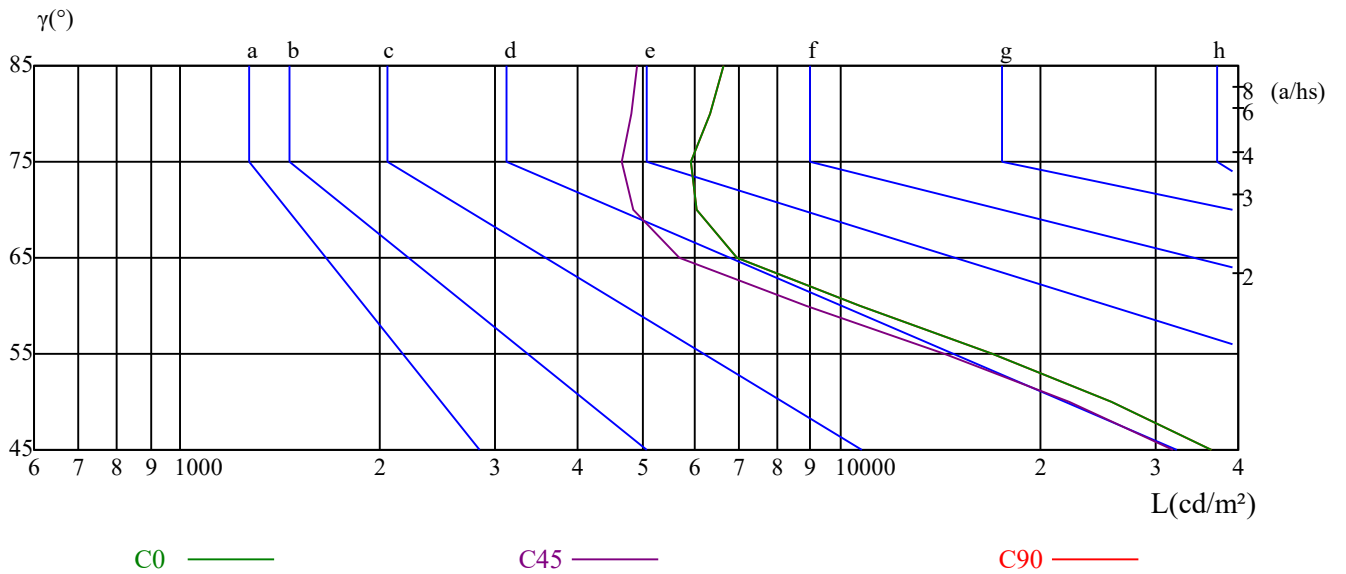
$\gamma$	45	50	55	60	65	70	75	80	85
C0	36407	25786	16923	10655	6948	6057	5934	6327	6664
C45	31773	22175	14330	8873	5681	4853	4645	4820	4912
C90	36407	25786	16923	10655	6948	6057	5934	6327	6664

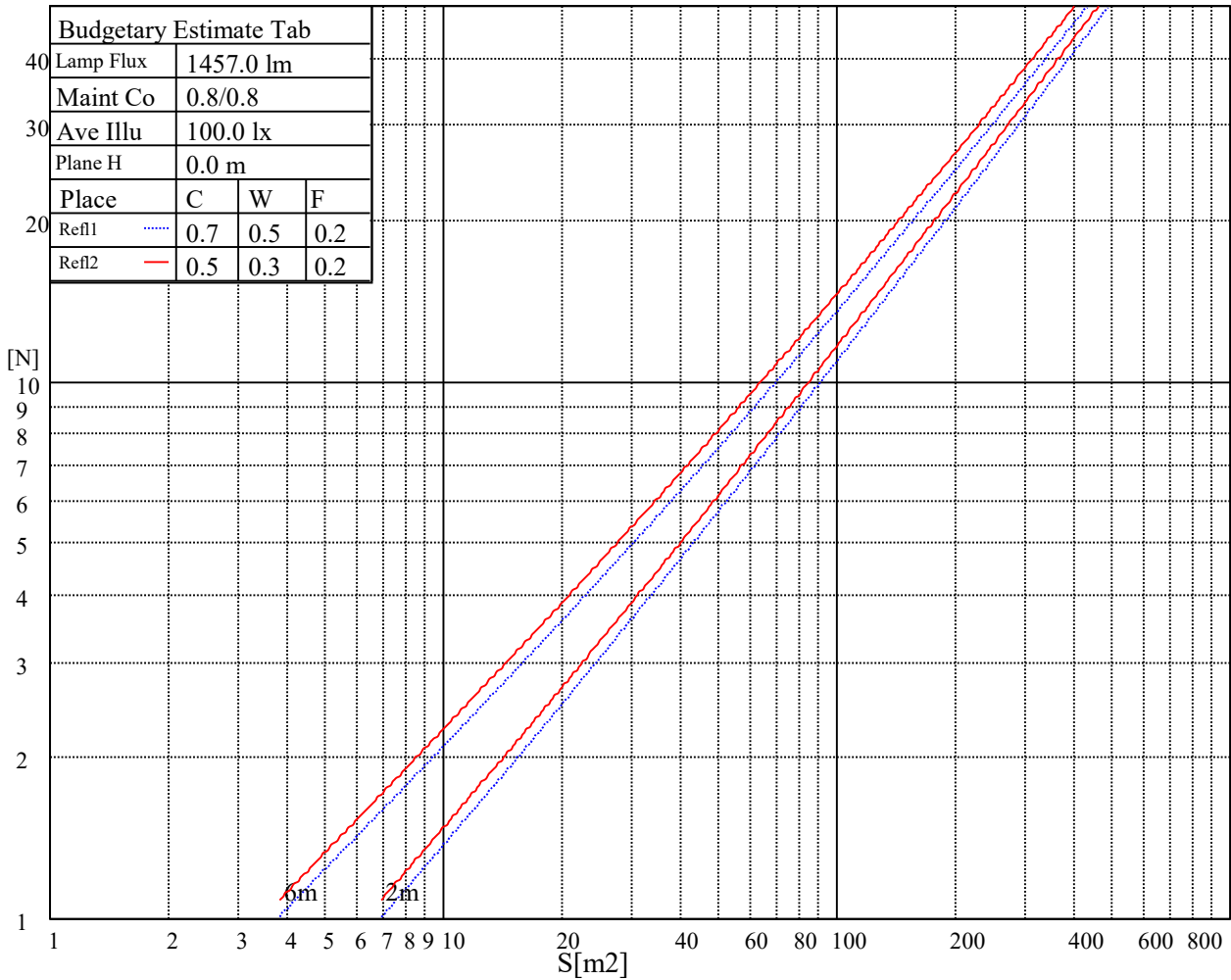
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
15045	15045	15045	17970	17970	17970	48064	48064	48064

Glare Table

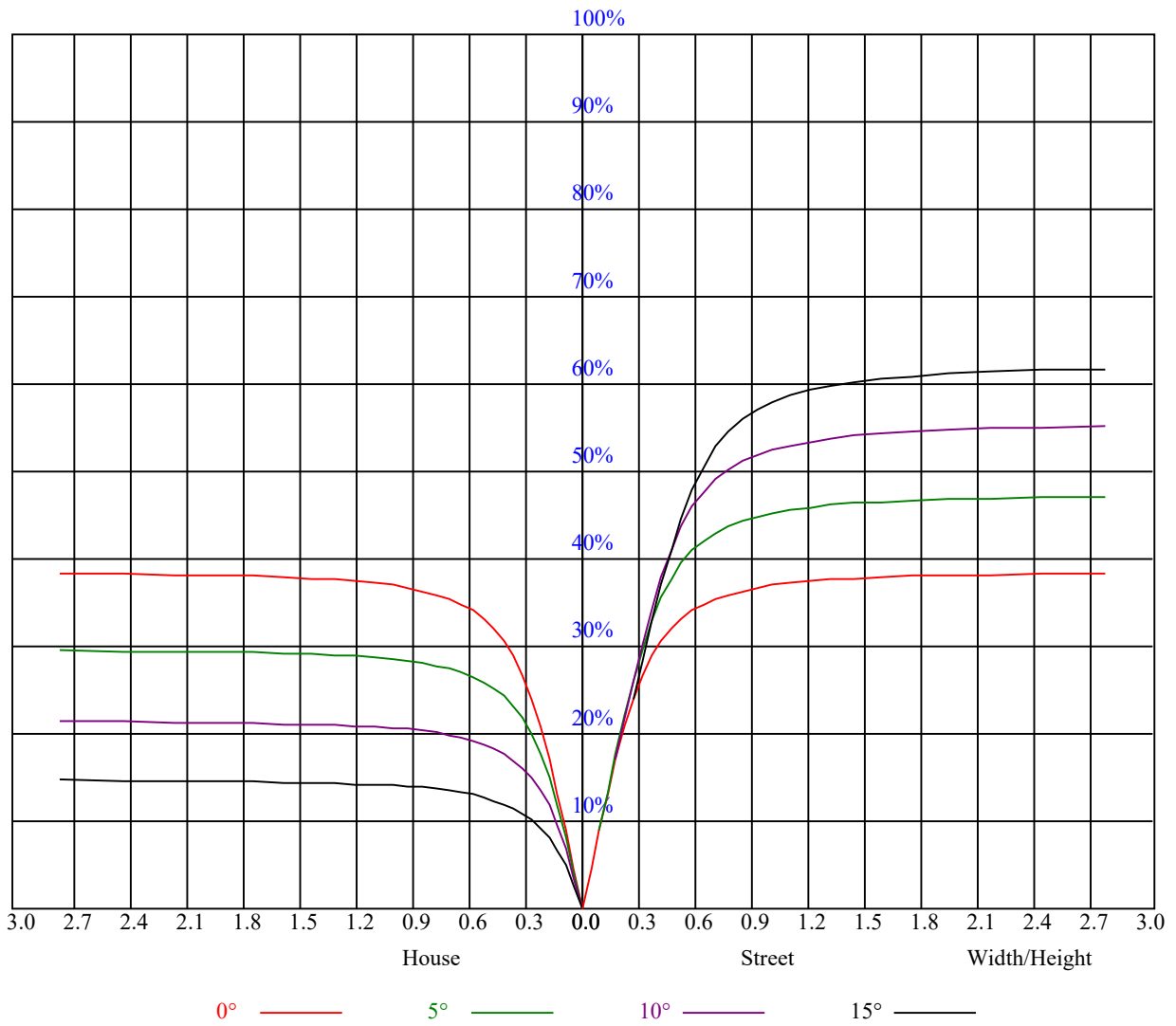
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.93	0.93	0.93	0.91	0.91	0.91	0.87	0.87	0.87	0.83	0.83	0.83	0.80	0.80	0.80	0.78
1	0.86	0.83	0.82	0.84	0.82	0.80	0.81	0.79	0.78	0.78	0.77	0.75	0.75	0.74	0.73	0.72
2	0.80	0.77	0.75	0.79	0.76	0.74	0.76	0.74	0.72	0.74	0.72	0.71	0.72	0.70	0.69	0.68
3	0.76	0.72	0.69	0.75	0.71	0.69	0.73	0.70	0.67	0.71	0.68	0.66	0.69	0.67	0.65	0.64
4	0.72	0.68	0.65	0.71	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.66	0.64	0.62	0.61
5	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.58
6	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.56
7	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.54	0.59	0.56	0.54	0.53
8	0.60	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.51
9	0.57	0.53	0.51	0.57	0.53	0.51	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49
10	0.55	0.51	0.49	0.55	0.51	0.49	0.54	0.51	0.49	0.54	0.51	0.48	0.53	0.50	0.48	0.47



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	2156.56	2158.21	2038.74	1778.87	1273.45	678.29	356.77	207.18	139.07
45.0	2163.72	2110.86	1962.76	1588.38	1006.43	523.04	285.19	175.35	122.45
90.0	2153.26	2051.40	1805.30	1364.30	795.79	393.87	241.37	160.93	110.11
135.0	2164.82	2055.26	1838.33	1397.33	851.72	420.63	281.89	165.50	114.85
180.0	2156.56	2050.30	1827.32	1259.14	774.97	395.75	232.17	151.68	103.73
225.0	2163.72	2110.31	1951.20	1580.12	1008.41	519.07	283.27	175.80	116.55
270.0	2153.26	2144.45	2020.57	1762.36	1300.43	701.42	353.46	213.23	145.35
315.0	2164.82	2140.04	1996.90	1692.98	1080.48	637.72	328.85	205.25	141.55
360.0	2156.56	2158.21	2038.74	1778.87	1273.45	678.29	356.77	207.18	139.07
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	94.70	65.46	42.45	26.81	14.98	11.29	9.91	9.25	9.41
45.0	78.51	53.68	33.86	20.81	12.61	10.30	9.36	8.92	8.81
90.0	75.26	51.09	29.84	17.01	12.28	10.68	9.69	9.36	7.93
135.0	78.01	53.62	31.38	17.78	12.72	11.01	10.19	10.57	8.42
180.0	69.87	46.80	29.07	16.63	11.67	10.02	9.19	8.97	8.48
225.0	79.12	53.68	34.19	21.03	12.88	10.35	9.36	8.81	8.53
270.0	99.76	69.48	45.92	28.13	15.47	11.89	10.24	9.30	9.03
315.0	97.39	68.49	45.15	26.87	15.03	11.89	10.79	10.74	10.30
360.0	94.70	65.46	42.45	26.81	14.98	11.29	9.91	9.25	9.41
C/γ(°)	90.0								
0.0	5.40								
45.0	4.96								
90.0	4.96								
135.0	4.96								
180.0	5.07								
225.0	4.96								
270.0	5.29								
315.0	5.45								
360.0	5.40								