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## Nata

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LumCAT: LN01D05060DA-N

Luminaire: 97.70.234.00

Report No: 210709-B009

Test No: 210709-C009

LampCAT: Fortimo LED SLM 1204 G7N

Lamp flux(lm): 2429.4

Number of Lamps: 1

Length(mm): 570

Phm Type: C

Voltage(V): 35.8900

Current(A): 0.5100

Power (W): 18.3030

PF: 0.0000

Ballast type: DC

Width(mm): 45

Height(mm): 20

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## Photometric Results

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Lumens(lm): 2208.24

Efficiency(%): 90.90%

Lumens(lm)/Power(W): 120.65

Central intensity(cd): 2373.047

Maximum intensity(cd): 2373.047

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=56.1

[C90/270]Total=56.1

Field angle(10%Imax): [C0/180]Total=89.7

[C90/270]Total=89.7

Maximum s/h(1/2): C0\_180=0.85 C90\_270=0.85

Maximum s/h(1/4): C0\_180=0.87 C90\_270=0.87

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 90.90%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 96.335%

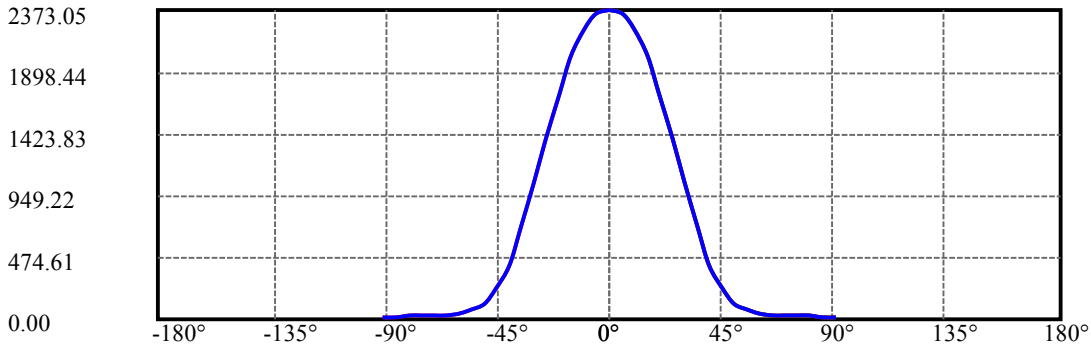
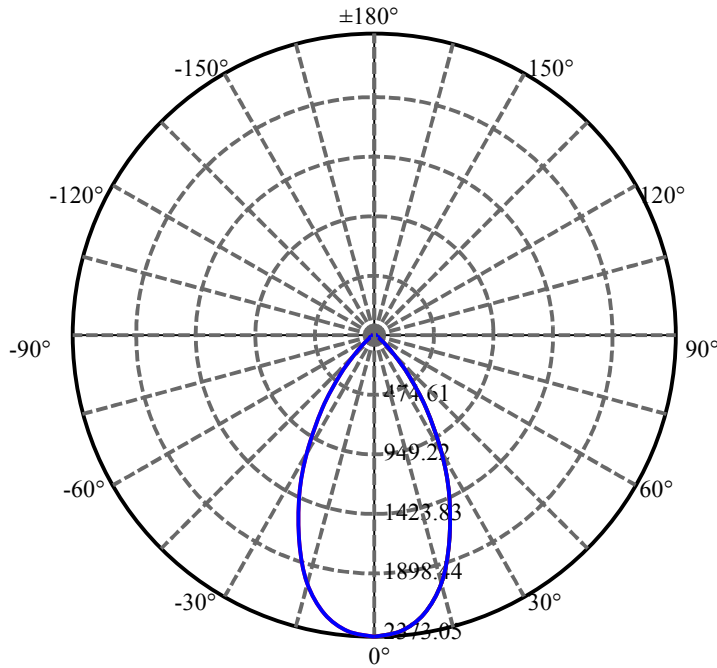
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2373.047	0.000	0	.000%	.000%
5.0	2343.656	56.387	56.387	2.321%	2.553%
10.0	2232.492	163.703	220.09	6.738%	9.967%
15.0	2025.211	252.564	472.654	10.396%	21.404%
20.0	1731.023	309.566	782.221	12.742%	35.423%
25.0	1386.352	326.955	1109.176	13.458%	50.229%
30.0	1057.226	309.237	1418.413	12.729%	64.233%
35.0	706.662	259.745	1678.157	10.692%	75.995%
40.0	417.234	187.514	1865.671	7.718%	84.487%
45.0	232.502	120.304	1985.975	4.952%	89.935%
50.0	123.778	71.992	2057.967	2.963%	93.195%
55.0	70.889	42.327	2100.294	1.742%	95.112%
60.0	45.942	27.005	2127.299	1.112%	96.335%
65.0	32.470	19.062	2146.361	.785%	97.198%
70.0	30.045	15.829	2162.19	.652%	97.915%
75.0	29.011	15.436	2177.626	.635%	98.614%
80.0	25.334	14.541	2192.168	.599%	99.272%
85.0	12.234	10.208	2202.376	.420%	99.734%
90.0	9.190	5.866	2208.242	.241%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1418.41	58.38%	64.23%
0-40	1865.67	76.79%	84.49%
0-60	2127.30	87.56%	96.33%
0-90	2202.38	90.65%	99.73%
0-120	2202.38	90.65%	99.73%
0-180	2208.24	90.90%	100.00%
60-90	102.08	4.20%	4.62%
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%
0-37.36	1766.59	72.72%	80.00%

ZONAL LUMEN SUMMARY

0-10	220.09
10-20	562.13
20-30	636.19
30-40	447.26
40-50	192.30
50-60	69.33
60-70	34.89
70-80	29.98
80-90	10.21
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: —————

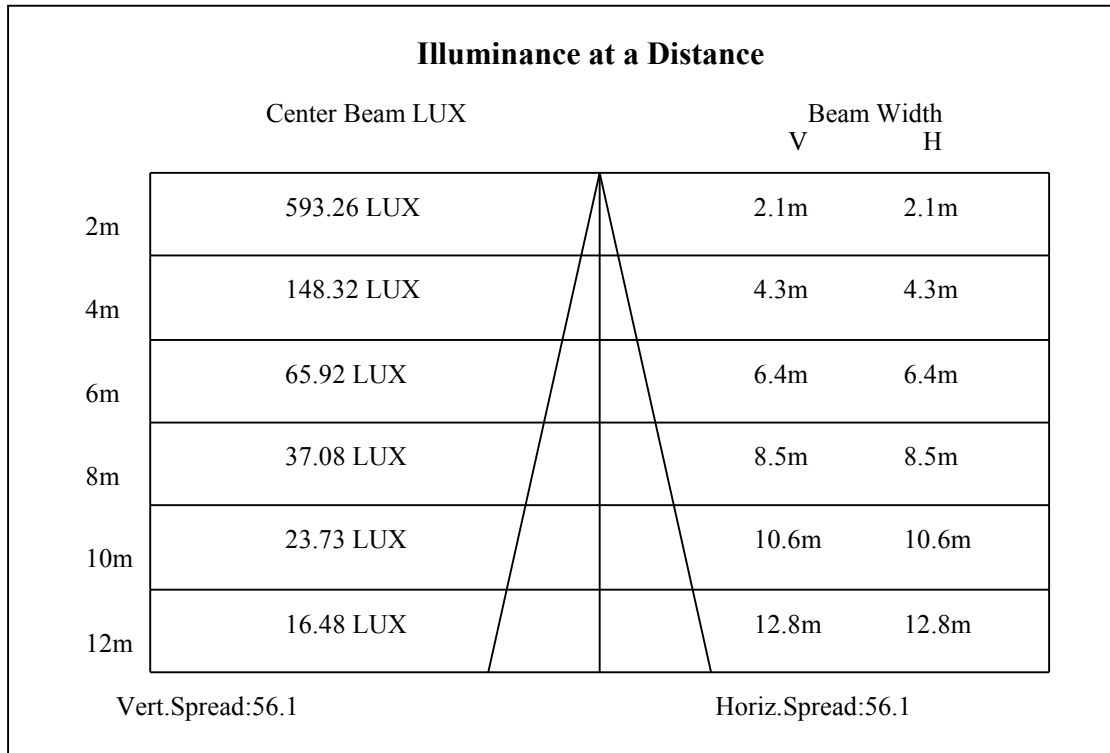
C90/C270: —————

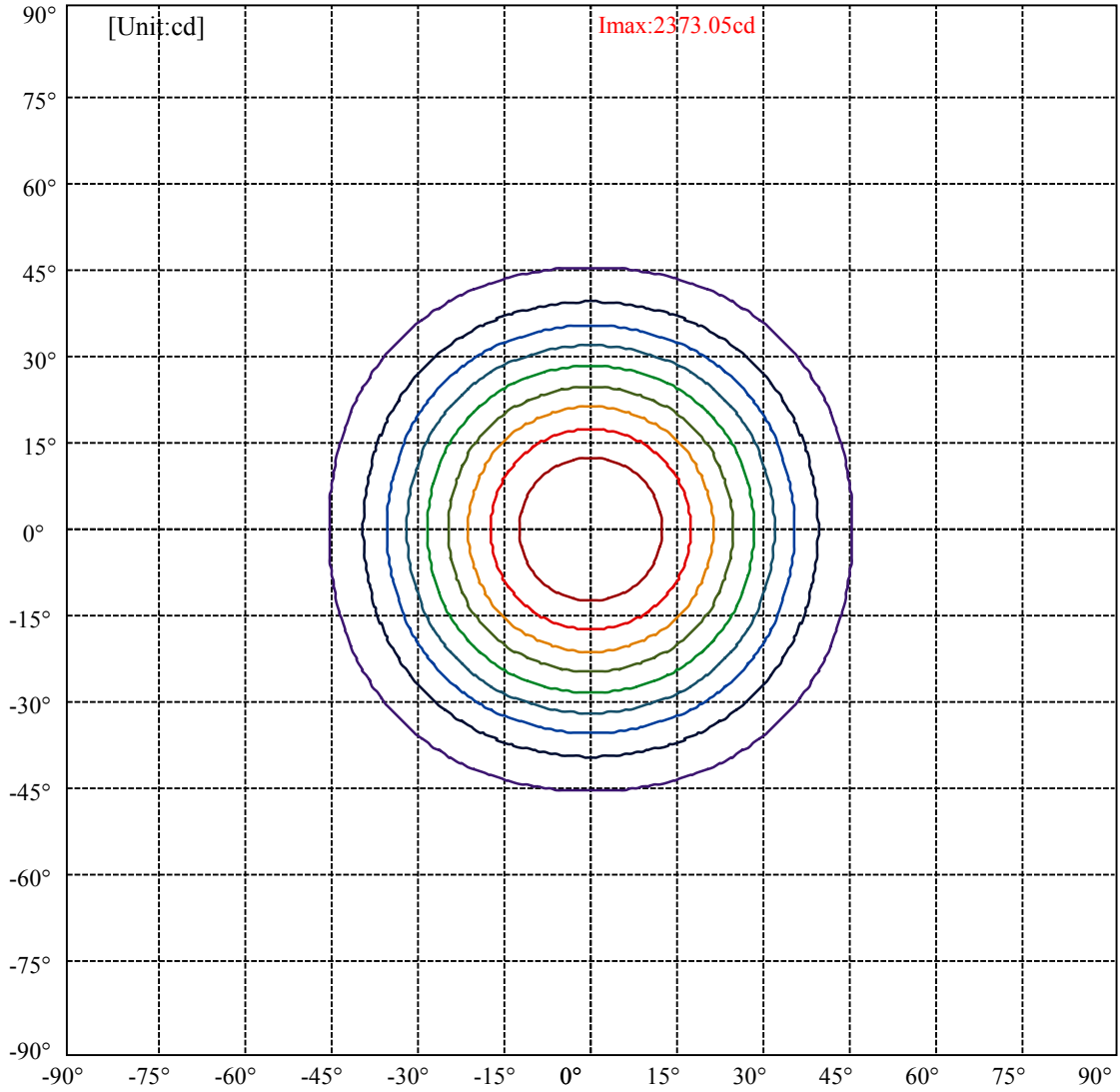
Field angle(10%Imax):C0/180Left:44.9 Right:44.9

:C90/270Left:44.9 Right:44.9

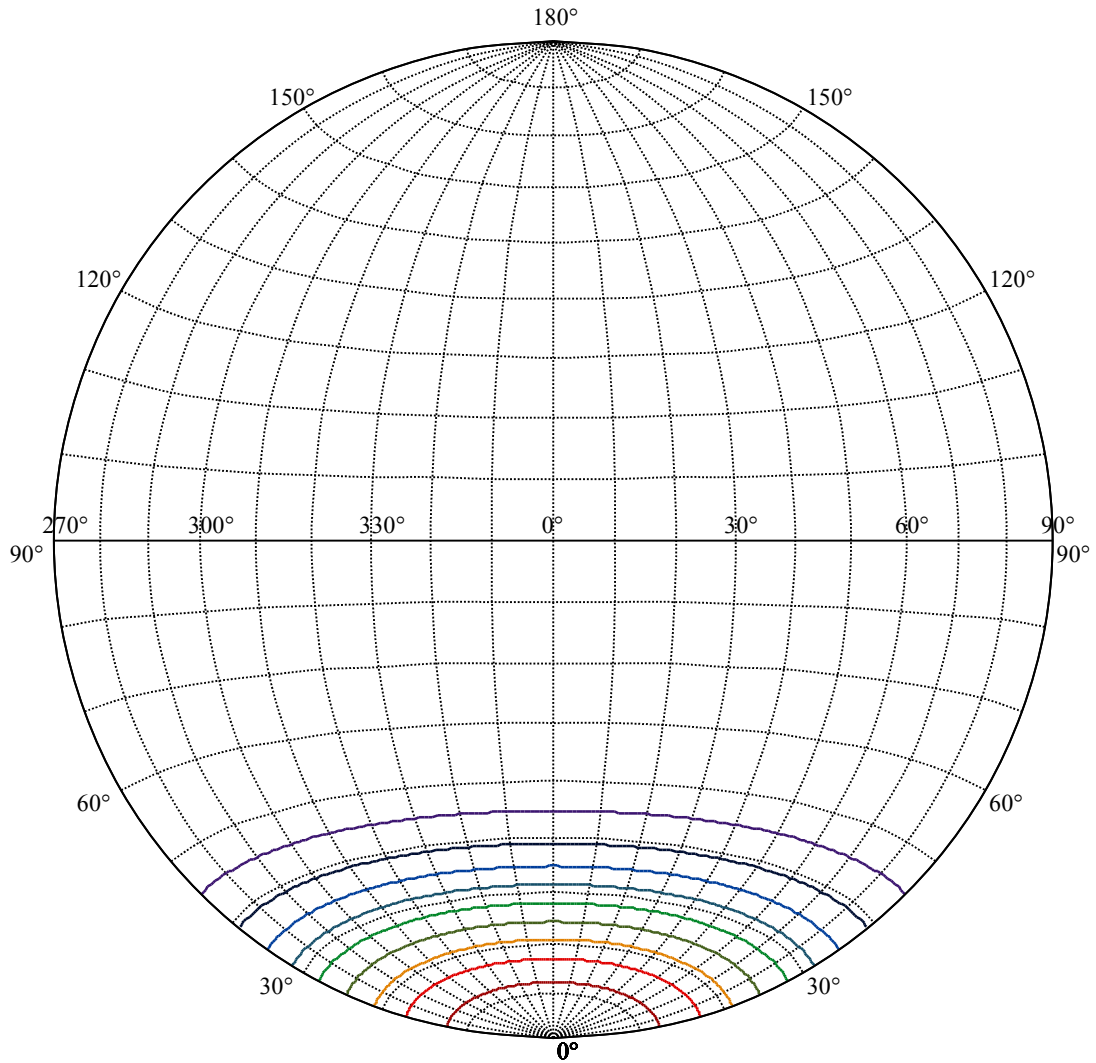
Beam Angle(50%Imax):C0/180Left:28.0 Right:28.0

:C90/270Left:28.0 Right:28.0





(10%Imax) 237.305	—
(20%Imax) 474.609	—
(30%Imax) 711.914	—
(40%Imax) 949.219	—
(50%Imax) 1186.52	—
(60%Imax) 1423.83	—
(70%Imax) 1661.13	—
(80%Imax) 1898.44	—
(90%Imax) 2135.74	—



House

[Unit:cd]

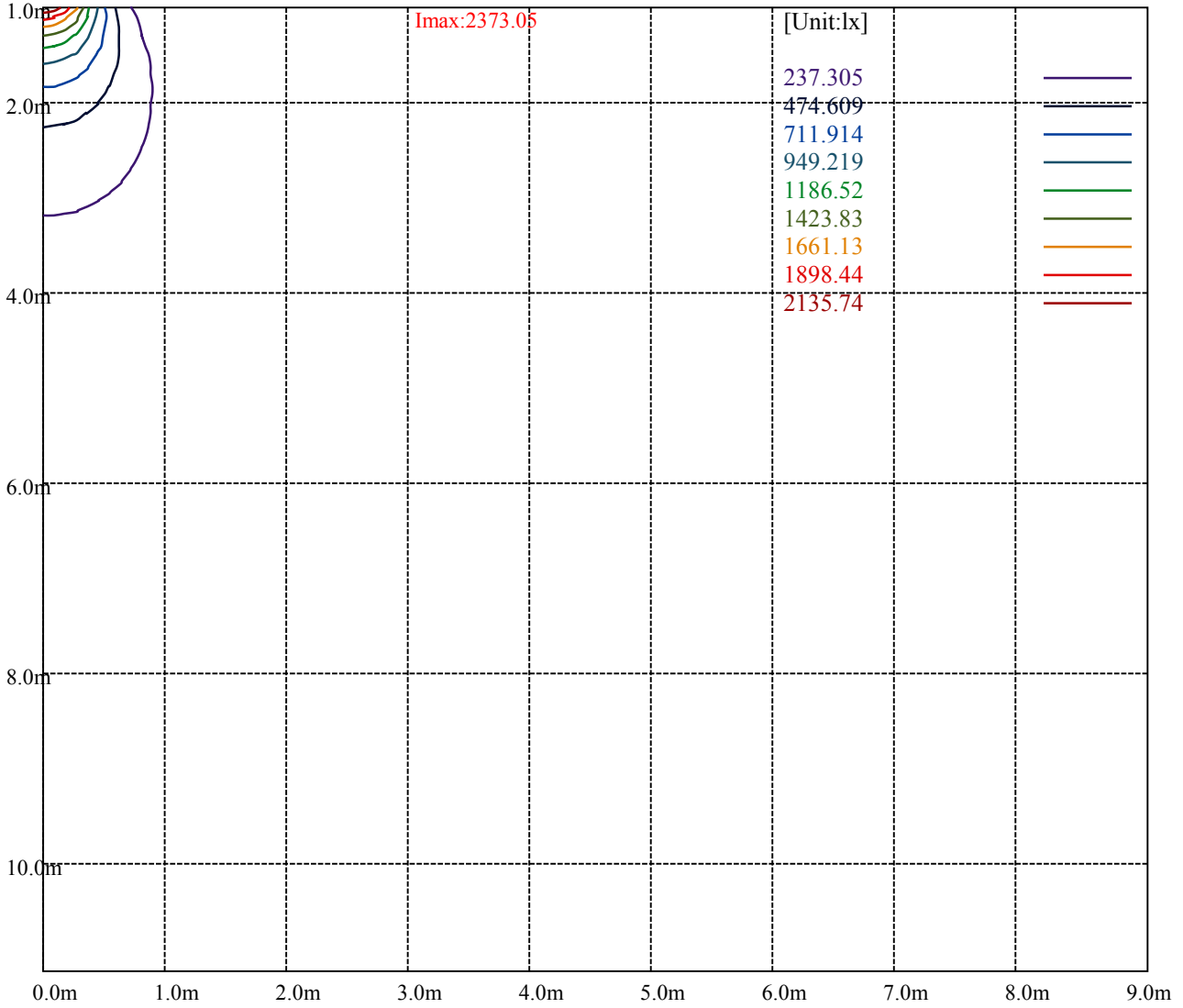
Road

Imax:2373.05

(10%Imax)	237.305	—
(20%Imax)	474.609	—
(30%Imax)	711.914	—
(40%Imax)	949.219	—
(50%Imax)	1186.52	—
(60%Imax)	1423.83	—
(70%Imax)	1661.13	—
(80%Imax)	1898.44	—
(90%Imax)	2135.74	—







Luminance Table

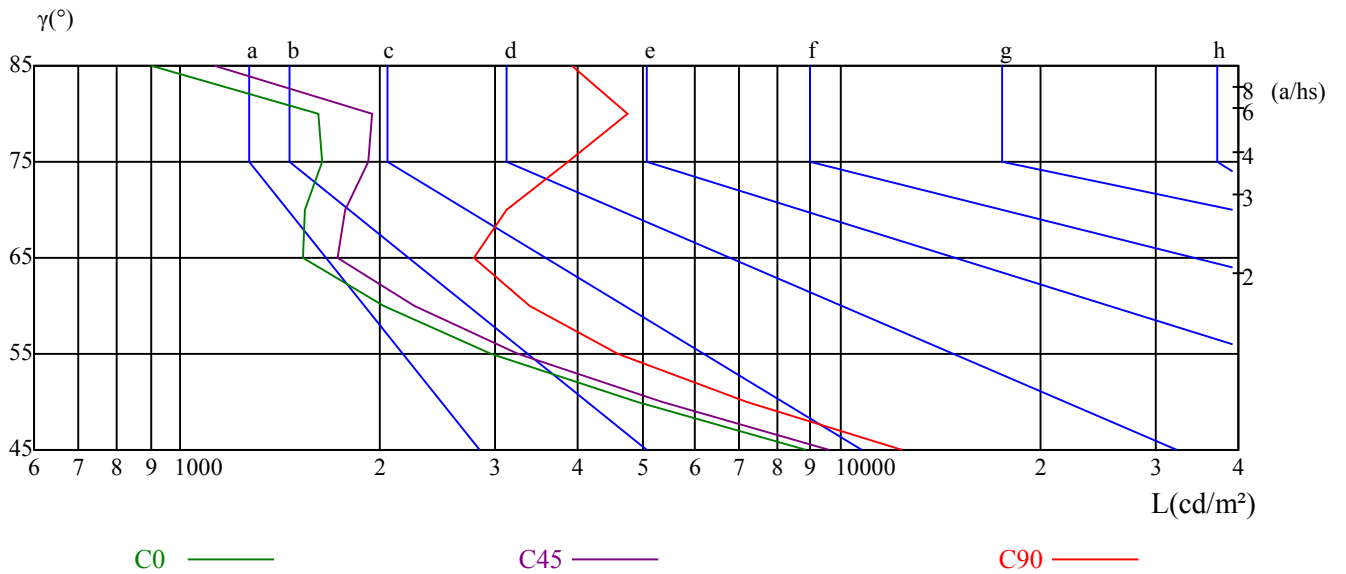
$\gamma$	45	50	55	60	65	70	75	80	85
C0	8875	4908	2948	2024	1534	1542	1644	1616	900
C45	9573	5347	3246	2257	1734	1773	1929	1946	1122
C90	12384	7206	4588	3377	2786	3124	3864	4744	3906

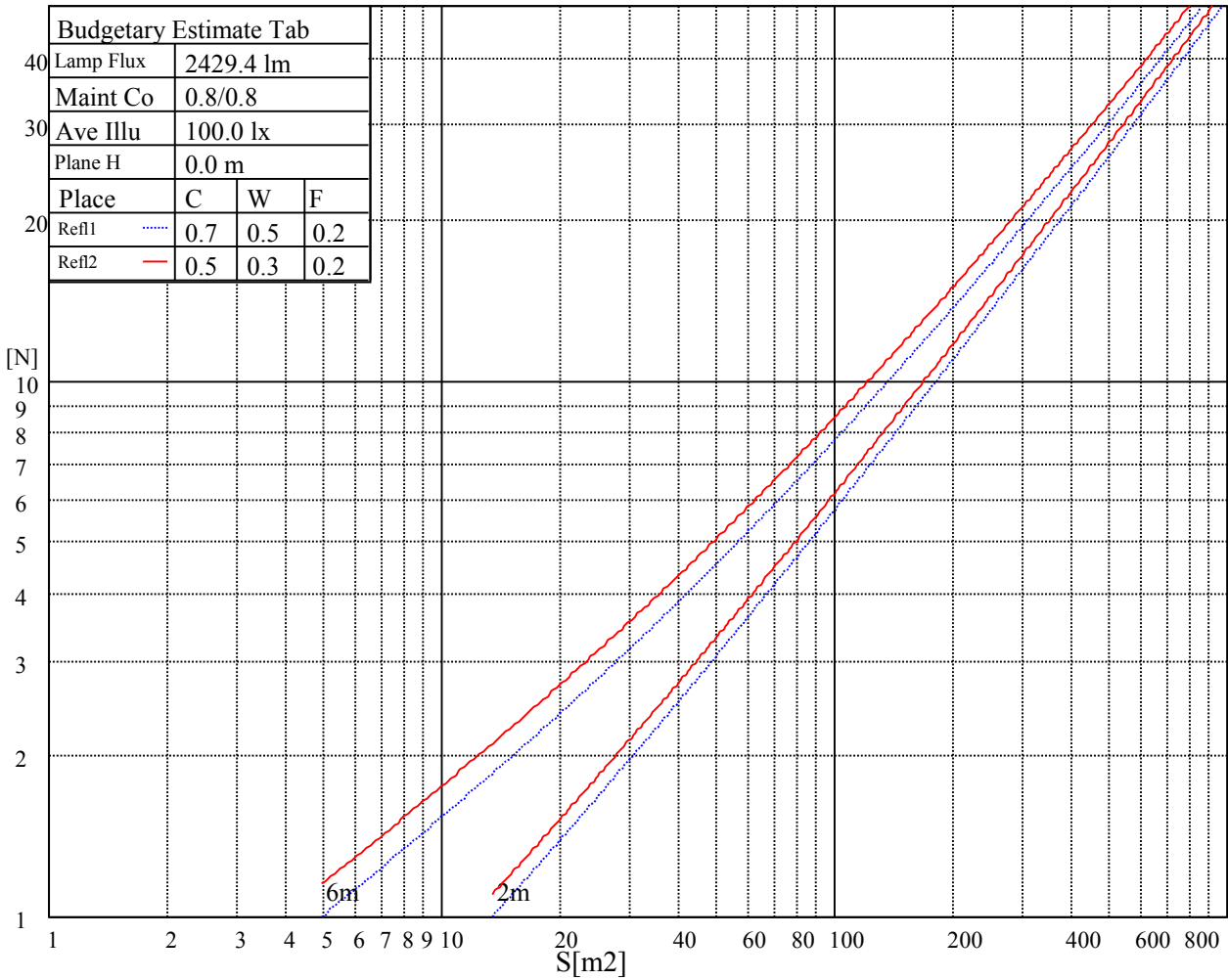
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2995	2995	2995	4370	4370	4370	5473	5473	5473

Glare Table

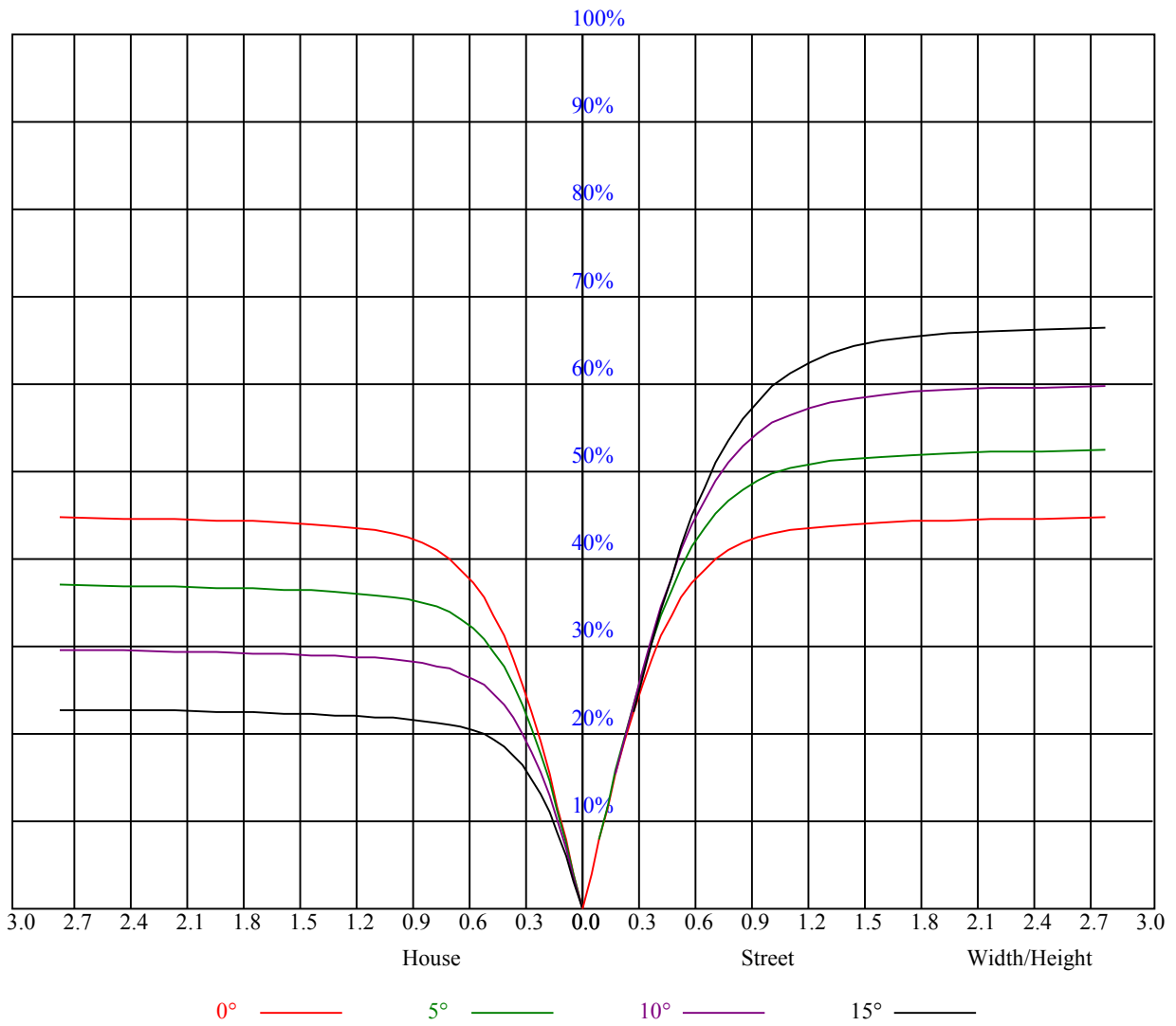
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	1.08	1.08	1.08	1.06	1.06	1.06	1.01	1.01	1.01	0.97	0.97	0.97	0.93	0.93	0.93	0.91
1	1.00	0.97	0.95	0.98	0.95	0.93	0.94	0.92	0.90	0.90	0.89	0.88	0.87	0.86	0.85	0.83
2	0.92	0.88	0.84	0.90	0.87	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.76
3	0.85	0.80	0.76	0.84	0.79	0.75	0.81	0.77	0.74	0.79	0.76	0.73	0.77	0.74	0.72	0.70
4	0.79	0.73	0.69	0.78	0.73	0.69	0.76	0.71	0.68	0.74	0.70	0.67	0.72	0.69	0.66	0.65
5	0.73	0.68	0.64	0.73	0.67	0.63	0.71	0.66	0.63	0.69	0.65	0.62	0.68	0.64	0.62	0.60
6	0.69	0.63	0.59	0.68	0.62	0.58	0.67	0.62	0.58	0.65	0.61	0.58	0.64	0.60	0.57	0.56
7	0.64	0.59	0.54	0.64	0.58	0.54	0.63	0.58	0.54	0.61	0.57	0.54	0.60	0.56	0.53	0.52
8	0.60	0.55	0.51	0.60	0.54	0.51	0.59	0.54	0.50	0.58	0.53	0.50	0.57	0.53	0.50	0.49
9	0.57	0.51	0.47	0.56	0.51	0.47	0.56	0.51	0.47	0.55	0.50	0.47	0.54	0.50	0.47	0.46
10	0.54	0.48	0.44	0.53	0.48	0.44	0.53	0.48	0.44	0.52	0.47	0.44	0.51	0.47	0.44	0.43



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	2377.69	2334.38	2232.56	2051.44	1758.38	1441.13	1160.44	834.75	514.13
45.0	2372.63	2325.94	2214.56	2018.81	1721.25	1374.19	1066.50	718.88	421.88
90.0	2369.25	2320.88	2175.19	1978.31	1672.88	1315.69	985.78	612.17	339.02
135.0	2372.63	2360.25	2244.38	2032.31	1726.88	1364.63	1006.88	653.63	365.06
180.0	2377.69	2364.19	2246.06	1995.75	1677.94	1306.69	942.75	570.49	322.99
225.0	2372.63	2369.25	2288.25	2076.19	1763.44	1399.50	1036.07	675.79	395.55
270.0	2369.25	2352.94	2261.25	2072.81	1810.69	1495.13	1171.69	817.88	518.63
315.0	2372.63	2321.44	2197.69	1976.06	1716.75	1393.88	1087.71	769.73	460.63
360.0	2377.69	2334.38	2232.56	2051.44	1758.38	1441.13	1160.44	834.75	514.13

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	286.31	155.25	85.84	53.16	36.28	27.06	20.87	16.82	12.83
45.0	284.06	128.31	72.68	48.54	32.40	24.47	19.01	15.47	11.42
90.0	185.12	104.91	61.26	40.78	33.19	50.18	60.36	48.54	10.80
135.0	188.38	109.29	63.34	41.85	29.53	23.01	17.83	14.06	10.58
180.0	170.27	96.58	58.67	39.60	28.46	22.56	17.33	13.67	10.63
225.0	209.25	116.72	67.44	44.55	31.11	23.34	18.68	14.40	11.59
270.0	293.06	141.58	81.00	50.74	35.16	44.33	58.22	64.07	17.61
315.0	243.56	137.59	76.89	48.32	33.64	25.43	19.80	15.64	12.43
360.0	286.31	155.25	85.84	53.16	36.28	27.06	20.87	16.82	12.83

C/γ(°)	90.0
0.0	9.62
45.0	9.06
90.0	8.94
135.0	8.94
180.0	9.28
225.0	9.11
270.0	9.34
315.0	9.23
360.0	9.62