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Nata

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LumCAT: 2-1258-N  
Luminaire: 92.70.045.00+92.70.059.00  
Report No: NT2018010403  
Test No: nata-0100  
LampCAT: CREE CXA2520  
Lamp flux(lm): 2275.0  
Number of Lamps: 1  
Length(mm): 70  
Phm Type: C

Voltage(V): 36.0000  
Current(A): 0.7100  
Power (W): 25.5600  
PF: 0.0000  
Ballast type: DC  
Width(mm): 70  
Height(mm): 0

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Photometric Results

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Lumens(lm): 1833.52  
Efficiency(%): 80.59%  
Lumens(lm)/Power(W): 71.73  
Central intensity(cd): 7936.243  
Maximum intensity(cd): 7936.243  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=22.1  
                                  [C90/270]Total=22.1  
Field angle(10%Imax): [C0/180]Total=45.4  
                                  [C90/270]Total=45.4  
Maximum s/h(1/2): C0\_180=0.38 C90\_270=0.38  
Maximum s/h(1/4): C0\_180=0.37 C90\_270=0.37  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 82.60%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 96.287%

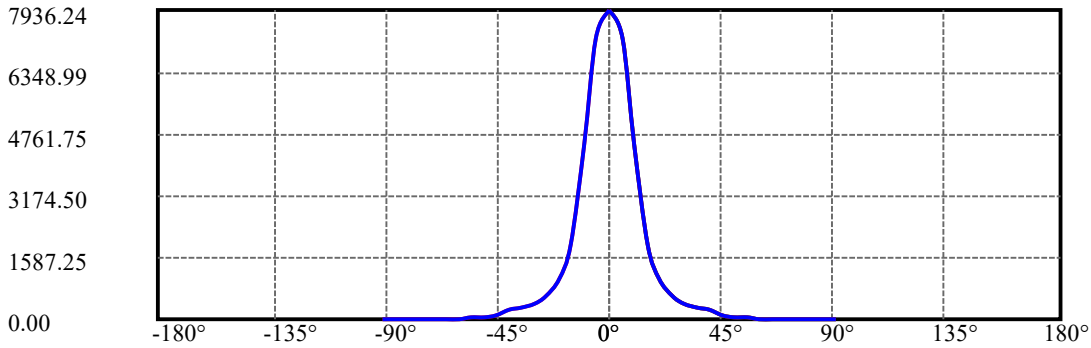
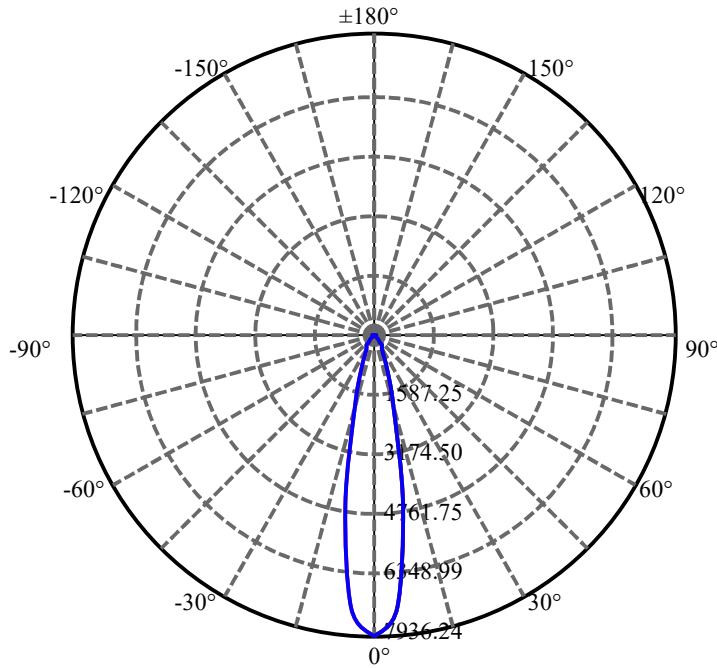
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7936.242	47.460	47.46	2.086%	2.588%
5.0	7212.457	344.563	392.023	15.146%	21.381%
10.0	4500.241	428.347	820.37	18.828%	44.743%
15.0	1928.488	273.592	1093.962	12.026%	59.665%
20.0	1020.904	191.393	1285.355	8.413%	70.103%
25.0	596.584	138.200	1423.555	6.075%	77.641%
30.0	415.655	113.918	1537.473	5.007%	83.854%
35.0	311.014	97.782	1635.255	4.298%	89.187%
40.0	233.267	82.188	1717.444	3.613%	93.669%
45.0	113.072	43.826	1761.27	1.926%	96.060%
50.0	61.422	25.791	1787.061	1.134%	97.466%
55.0	32.002	14.369	1801.43	.632%	98.250%
60.0	16.895	8.020	1809.45	.353%	98.687%
65.0	8.775	4.359	1813.809	.192%	98.925%
70.0	8.217	4.233	1818.041	.186%	99.156%
75.0	8.190	4.336	1822.377	.191%	99.392%
80.0	8.203	4.428	1826.806	.195%	99.634%
85.0	8.286	4.525	1831.33	.199%	99.881%
90.0	7.983	2.188	1833.518	.096%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1537.47	67.58%	83.85%
0-40	1717.44	75.49%	93.67%
0-60	1809.45	79.54%	98.69%
0-90	1831.33	80.50%	99.88%
0-120	1831.33	80.50%	99.88%
0-180	1833.52	80.59%	100.00%
60-90	29.90	1.31%	1.63%
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%
0-26.90	1466.82	64.48%	80.00%

ZONAL LUMEN SUMMARY

0-10	820.37
10-20	464.98
20-30	252.12
30-40	179.97
40-50	69.62
50-60	22.39
60-70	8.59
70-80	8.76
80-90	4.52
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: ———

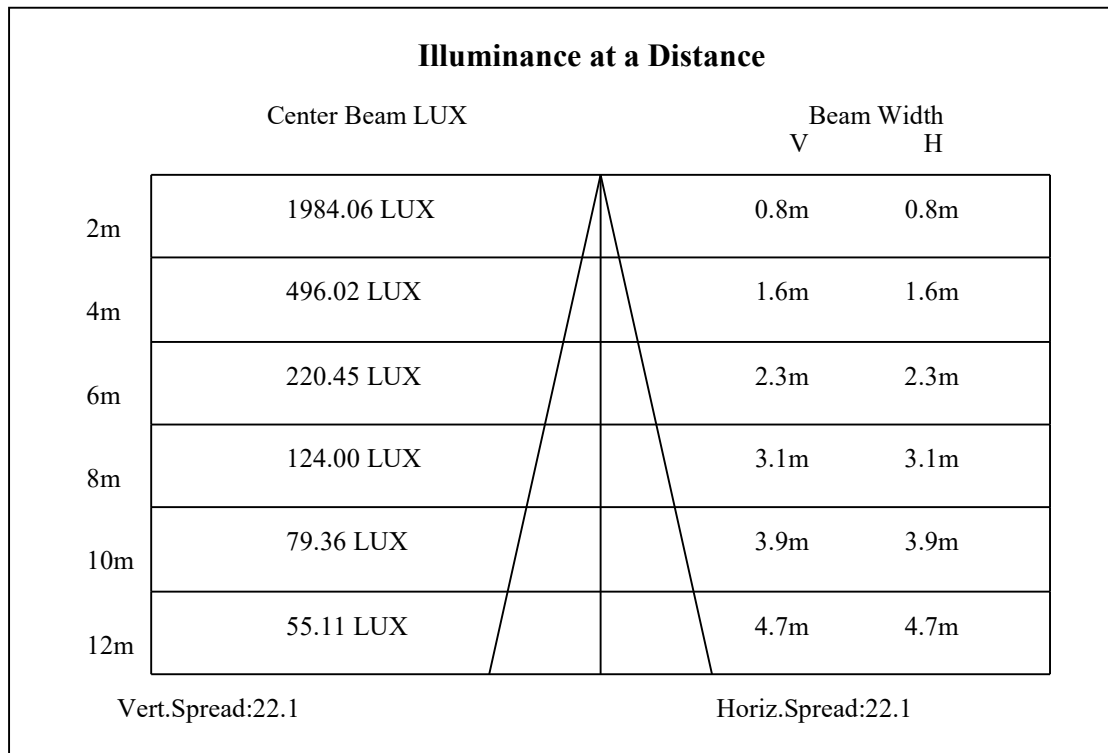
C90/C270: ———

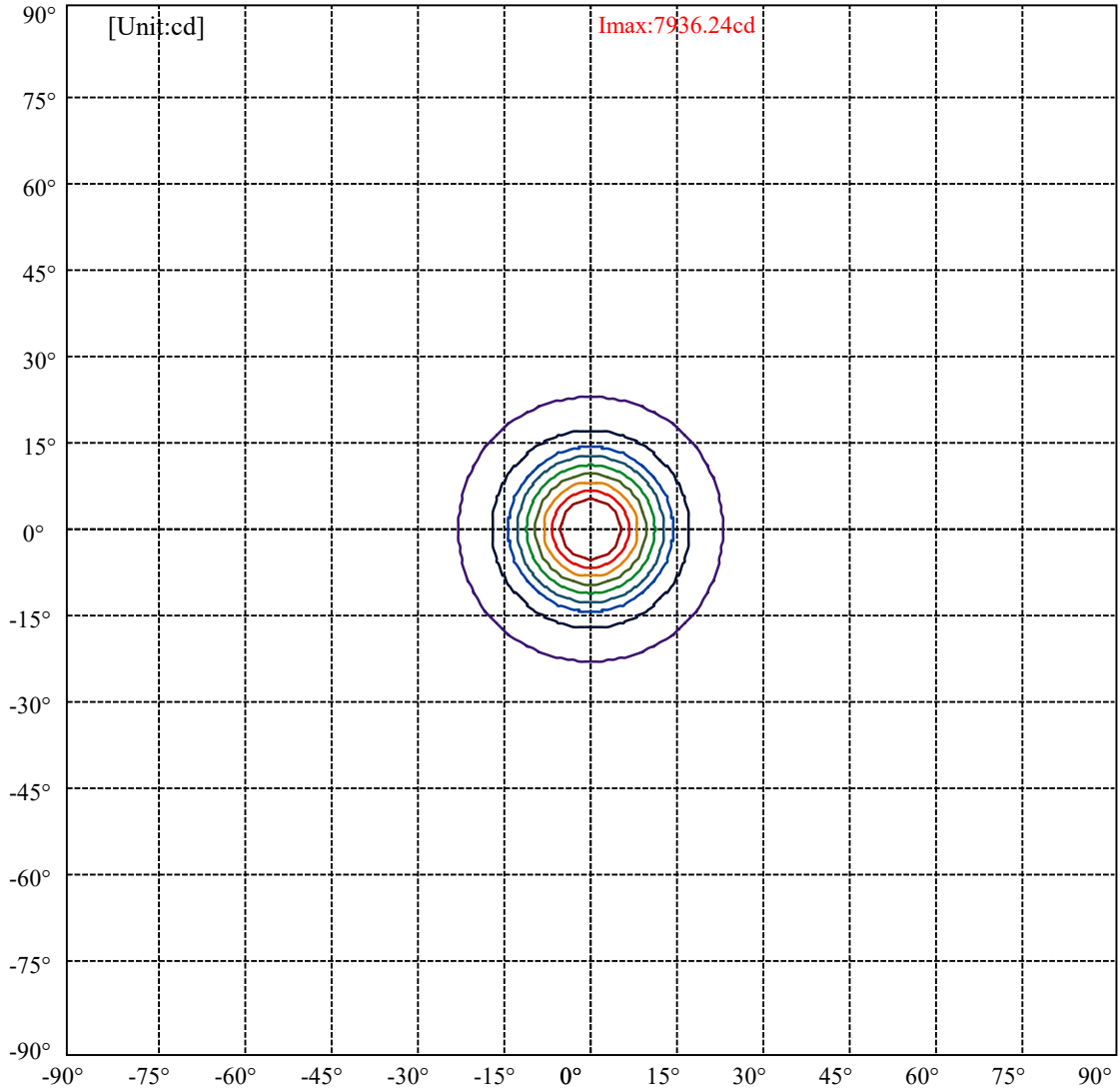
Field angle(10%Imax):C0/180Left:22.7 Right:22.7

:C90/270Left:22.7 Right:22.7

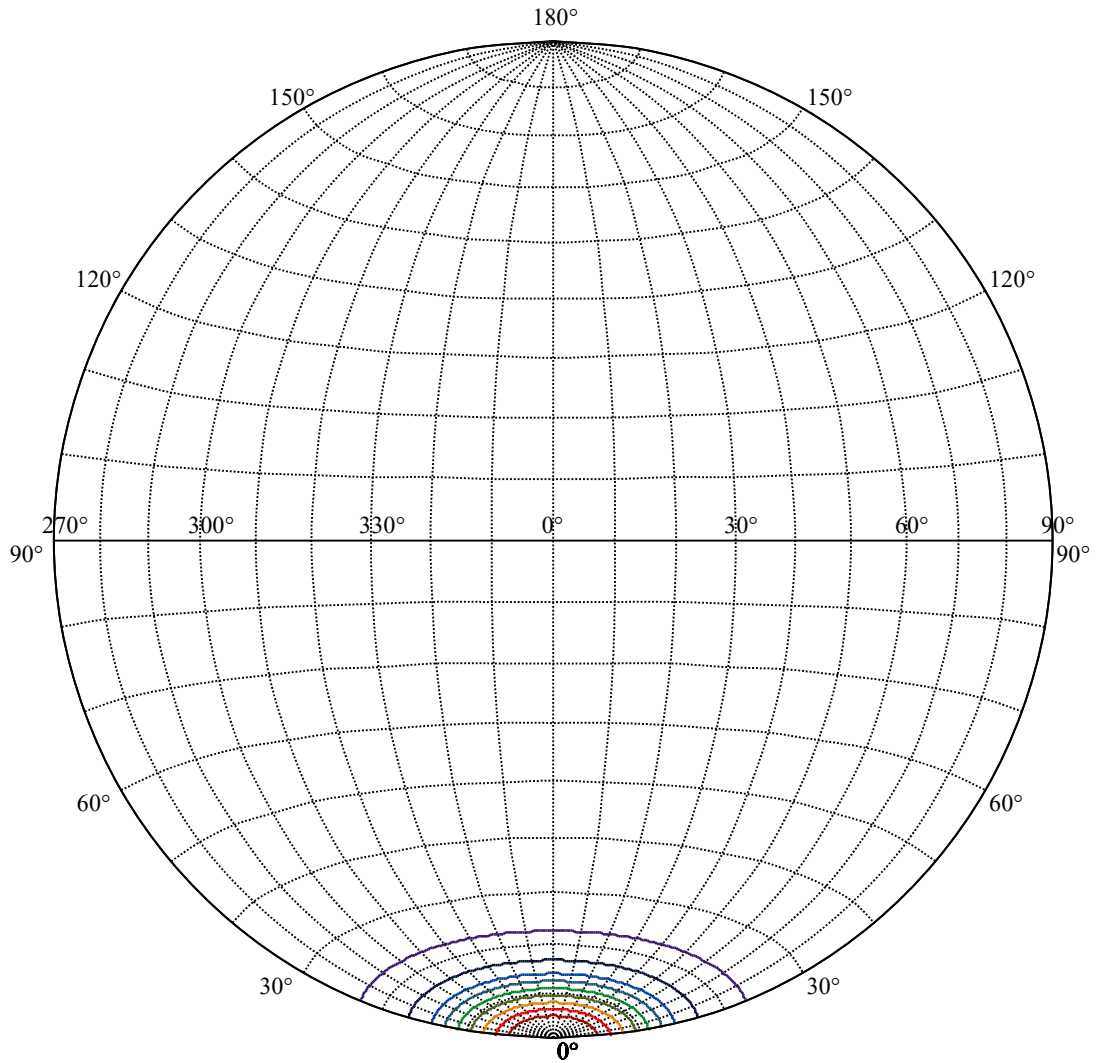
Beam Angle(50%Imax):C0/180Left:11.0 Right:11.0

:C90/270Left:11.0 Right:11.0





(10%Imax) 793.624	—
(20%Imax) 1587.25	—
(30%Imax) 2380.87	—
(40%Imax) 3174.5	—
(50%Imax) 3968.12	—
(60%Imax) 4761.75	—
(70%Imax) 5555.37	—
(80%Imax) 6348.99	—
(90%Imax) 7142.62	—



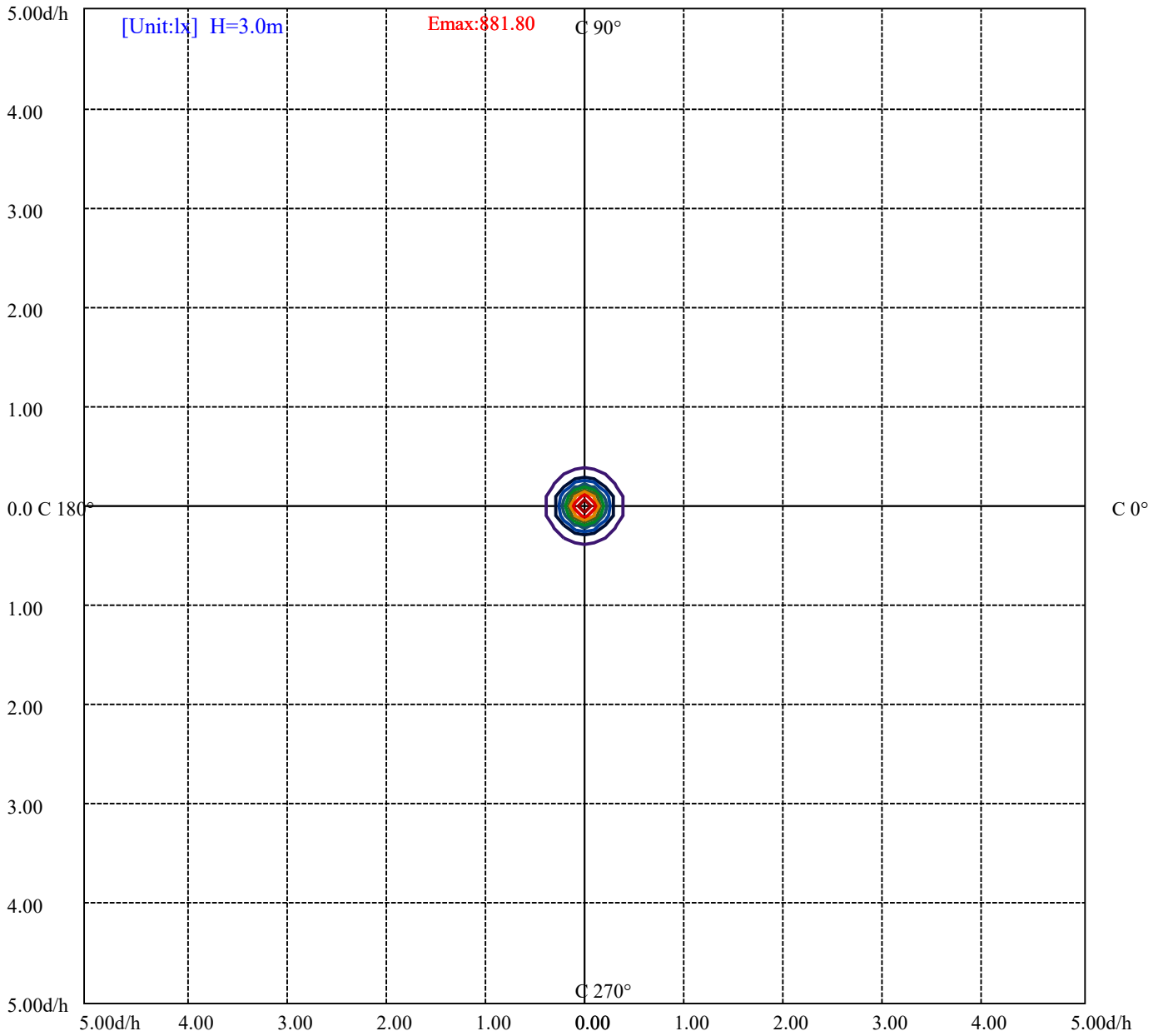
House

[Unit:cd]

Road

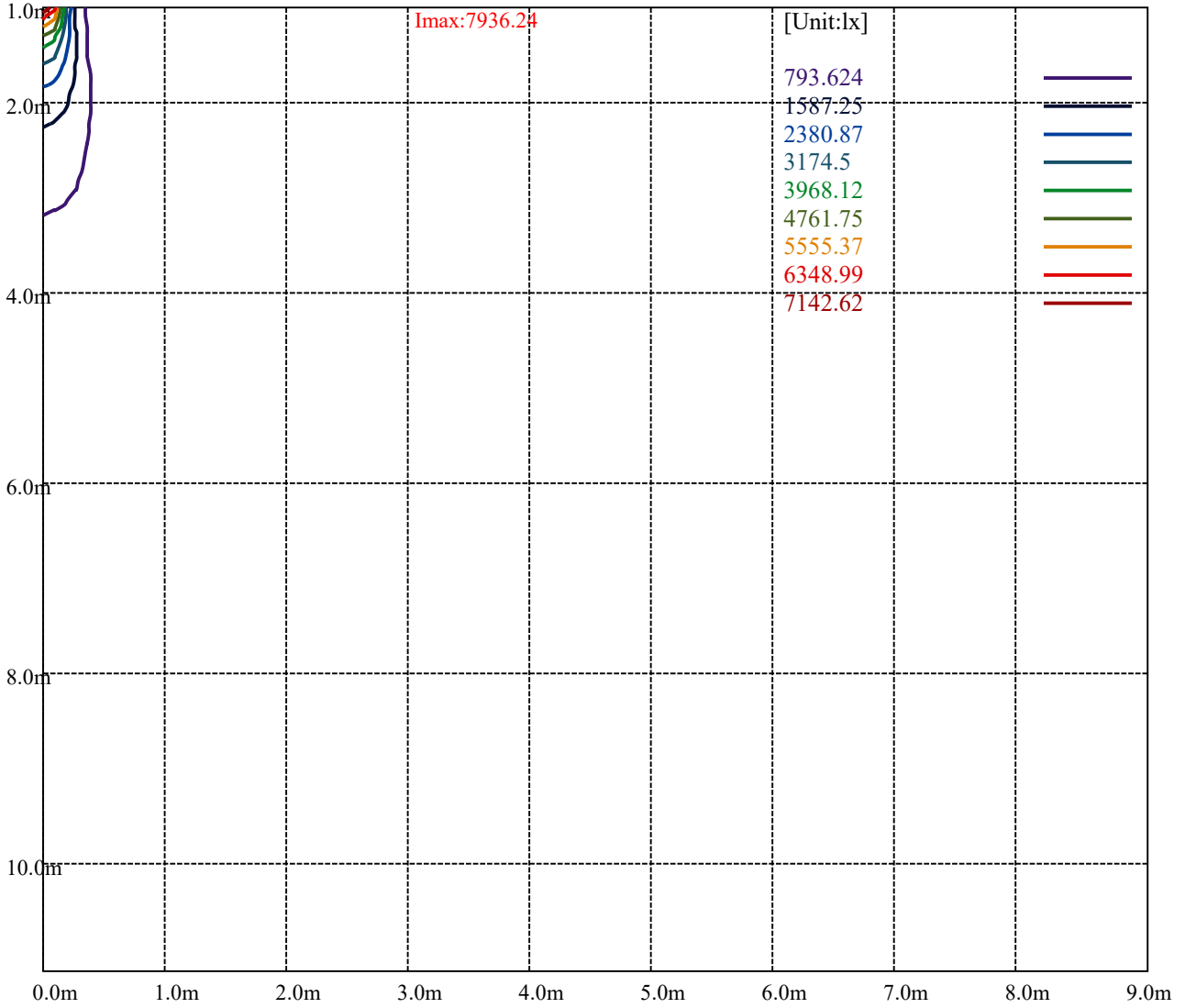
**Imax:7936.24**

(10%Imax) 793.624	—
(20%Imax) 1587.25	—
(30%Imax) 2380.87	—
(40%Imax) 3174.5	—
(50%Imax) 3968.12	—
(60%Imax) 4761.75	—
(70%Imax) 5555.37	—
(80%Imax) 6348.99	—
(90%Imax) 7142.62	—



- (10%Emax) 88.18022
- (20%Emax) 176.36
- (30%Emax) 264.5411
- (40%Emax) 352.7211
- (50%Emax) 440.9011
- (60%Emax) 529.0811
- (70%Emax) 617.2611
- (80%Emax) 705.4422
- (90%Emax) 793.6223





Luminance Table

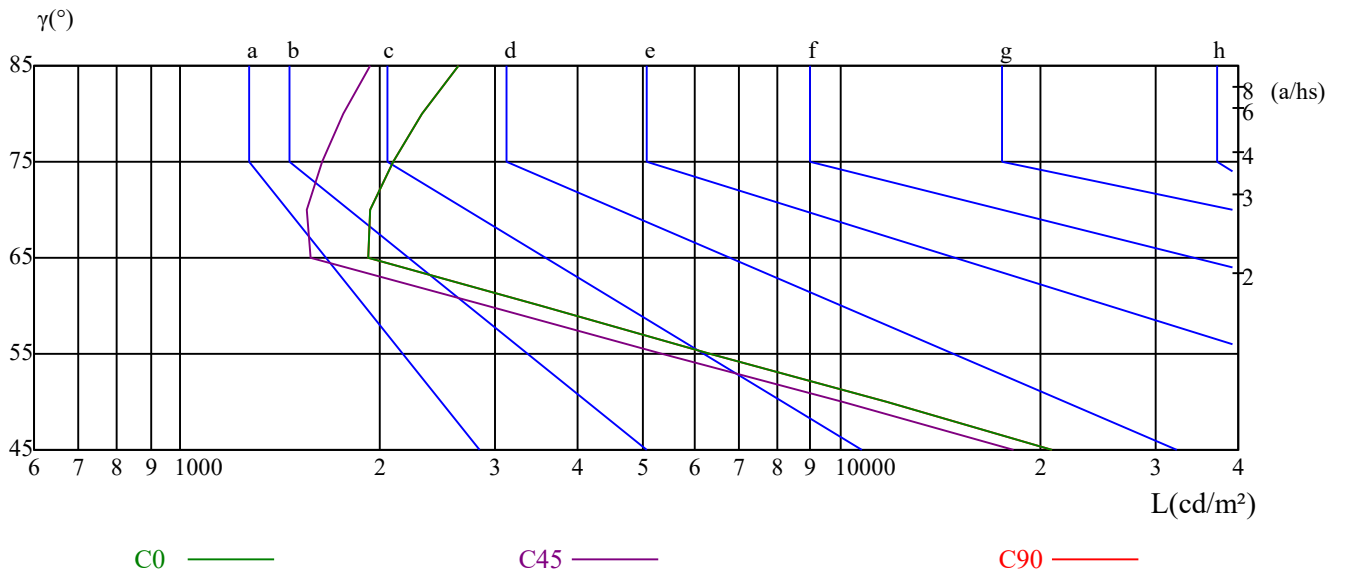
$\gamma$	45	50	55	60	65	70	75	80	85
C0	20958	11720	6341	3509	1931	1937	2097	2318	2633
C45	18253	10057	5358	2916	1575	1549	1639	1763	1939
C90	20958	11720	6341	3509	1931	1937	2097	2318	2633

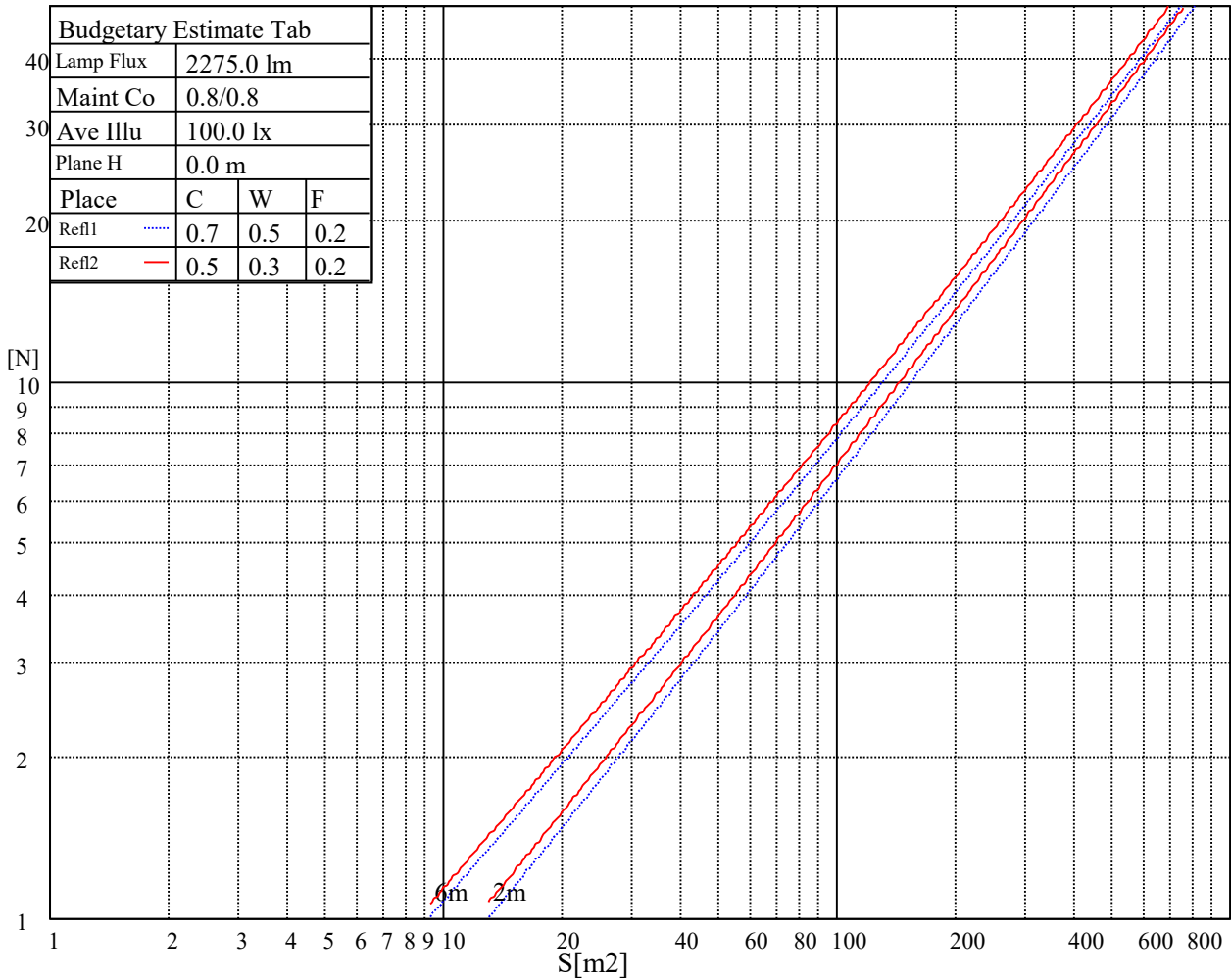
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
4237	4237	4237	6458	6458	6458	19402	19402	19402

Glare Table

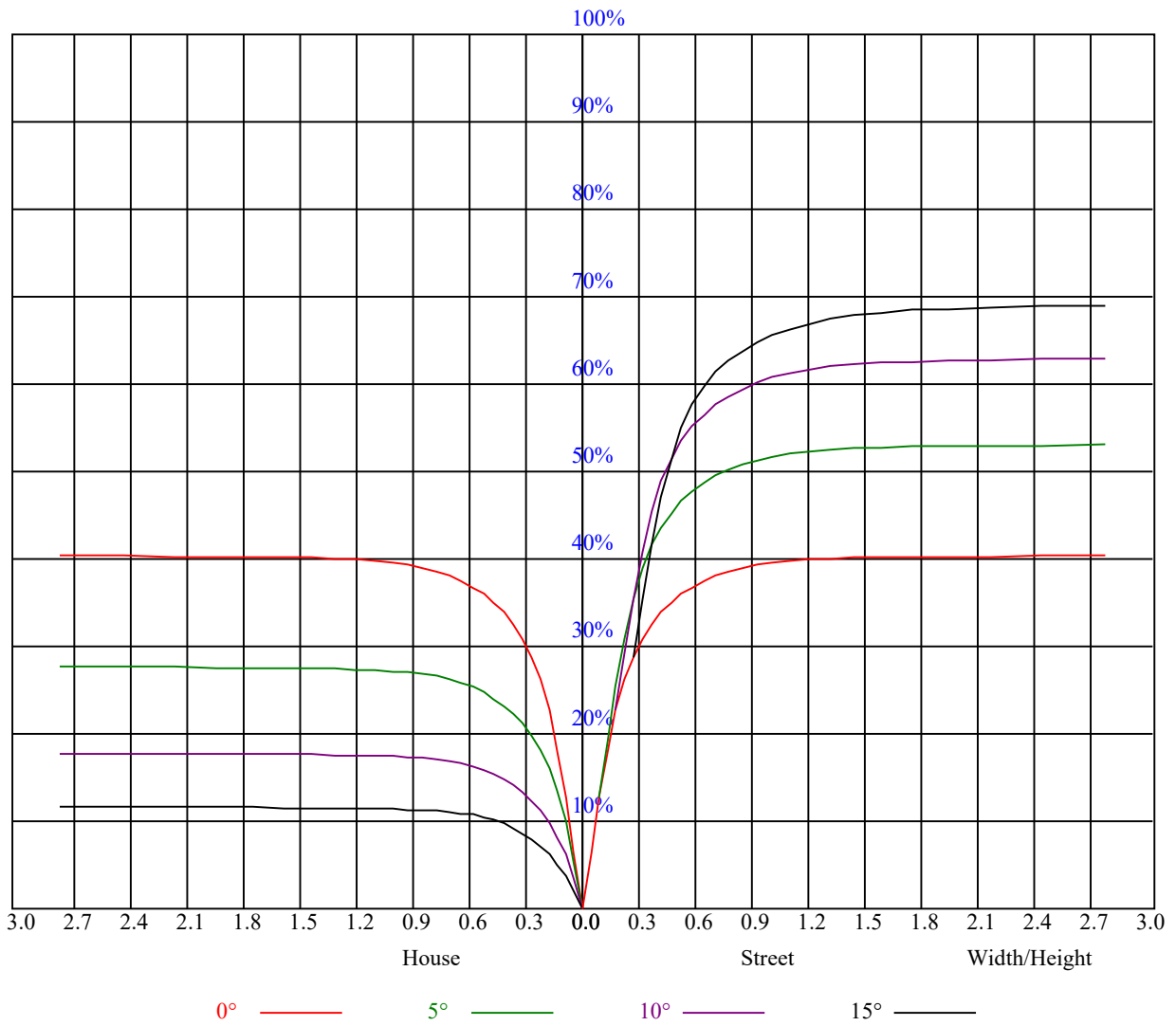
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

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	0.98	0.98	0.98	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.84	0.84	0.84	0.83
1	0.90	0.88	0.85	0.88	0.86	0.84	0.85	0.83	0.81	0.82	0.80	0.79	0.79	0.78	0.77	0.75
2	0.85	0.82	0.79	0.84	0.81	0.78	0.81	0.79	0.76	0.79	0.77	0.75	0.76	0.75	0.73	0.72
3	0.81	0.77	0.74	0.80	0.76	0.74	0.78	0.75	0.73	0.76	0.73	0.71	0.74	0.72	0.70	0.69
4	0.77	0.73	0.70	0.77	0.73	0.70	0.75	0.72	0.69	0.73	0.71	0.68	0.72	0.70	0.68	0.67
5	0.74	0.70	0.67	0.74	0.70	0.67	0.72	0.69	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
6	0.72	0.67	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
7	0.69	0.65	0.62	0.68	0.65	0.62	0.68	0.64	0.62	0.67	0.64	0.61	0.66	0.63	0.61	0.60
8	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.59	0.58
9	0.65	0.61	0.58	0.64	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.62	0.60	0.58	0.57
10	0.63	0.59	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.58	0.56	0.61	0.58	0.56	0.55



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	7946.84	7068.14	4445.25	1796.49	947.52	574.79	417.88	313.82	224.24
45.0	7945.19	7062.08	4455.71	1870.82	1026.25	618.83	419.53	298.96	227.99
90.0	7944.64	7285.61	4355.51	1844.39	1044.09	613.99	415.35	309.36	228.76
135.0	7908.30	7705.14	5517.75	2604.72	1205.18	665.08	457.52	334.74	278.03
180.0	7946.84	7371.50	4841.11	1991.39	1016.78	595.27	421.13	320.59	240.43
225.0	7945.19	7314.24	4439.20	1924.77	1050.92	584.59	410.01	302.15	226.89
270.0	7944.64	7222.85	4470.03	1885.68	1049.37	610.58	414.02	318.23	234.60
315.0	7908.30	6670.08	3477.36	1509.65	827.11	509.55	369.81	290.26	205.20
360.0	7946.84	7068.14	4445.25	1796.49	947.52	574.79	417.88	313.82	224.24

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	107.30	57.70	29.23	15.64	8.26	8.20	8.20	8.37	8.64
45.0	109.73	59.90	31.60	16.57	8.48	8.31	8.26	8.26	8.37
90.0	110.17	62.71	32.21	16.74	8.75	8.26	8.26	8.26	8.37
135.0	145.46	75.26	38.76	20.04	10.41	8.20	8.15	8.15	8.20
180.0	116.72	62.82	32.48	17.73	8.81	8.20	8.15	8.09	8.04
225.0	111.60	60.95	32.76	17.84	8.81	8.26	8.20	8.20	8.26
270.0	110.83	62.05	32.87	17.18	8.59	8.20	8.20	8.20	8.26
315.0	92.77	49.99	26.10	13.43	8.09	8.09	8.09	8.09	8.15
360.0	107.30	57.70	29.23	15.64	8.26	8.20	8.20	8.37	8.64

C/γ(°)	90.0
0.0	7.87
45.0	8.09
90.0	8.04
135.0	7.98
180.0	7.87
225.0	8.04
270.0	8.04
315.0	7.93
360.0	7.87