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## Nata

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Client:

LumCAT: 2-2748-L

Luminaire: 92.70.412.00

Report No: 2024822-B011

Ballast type: AC

Test No: 2024822-C011

Voltage(V): 34.890

LampCAT: Fortimo\_SLM\_C\_1208

Current(A): 0.576

Lamp flux(lm): 3311.0

Power (W): 20.060

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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## Photometric Results

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Lumens(lm): 3119.32, Efficiency(%): 94.21% , Luminous Efficacy(lm/W): 155.50

Central intensity(cd): 14665.090, Maximum intensity(cd): 14665.090

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

Beam Angle(50%Imax): [C0/180]Total=19.6

[C90/270]Total=19.6

Field angle(10%Imax): [C0/180]Total=49.4

[C90/270]Total=49.4

Maximum s/h(1/2): C0\_180=0.33 C90\_270=0.33

Maximum s/h(1/4): C0\_180=0.36 C90\_270=0.36

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 94.21%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.013%

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Equipment: GMS 1800  
Temperature(°C): 25.0

Date: 2024/8/22  
Humidity(%): 60.0%

Operator: NT  
Distance(m): 7.25

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14665.095	0.000	0	0.00%	0.00%
1.0	14553.663	13.981	13.981	0.42%	0.45%
2.0	14062.834	41.073	55.054	1.24%	1.76%
3.0	13425.612	65.743	120.797	1.99%	3.87%
4.0	12911.847	88.160	208.957	2.66%	6.70%
5.0	12225.486	108.139	317.096	3.27%	10.17%
6.0	11053.322	122.336	439.433	3.69%	14.09%
7.0	10068.288	131.101	570.534	3.96%	18.29%
8.0	9184.778	137.791	708.325	4.16%	22.71%
9.0	8049.415	139.674	847.999	4.22%	27.19%
10.0	7113.454	137.218	985.217	4.14%	31.58%
11.0	6265.167	133.680	1118.897	4.04%	35.87%
12.0	5429.279	127.837	1246.734	3.86%	39.97%
13.0	4736.249	120.639	1367.373	3.64%	43.84%
14.0	4194.126	114.308	1481.681	3.45%	47.50%
15.0	3667.266	107.925	1589.606	3.26%	50.96%
16.0	3295.984	102.031	1691.637	3.08%	54.23%
17.0	2994.906	97.966	1789.603	2.96%	57.37%
18.0	2710.024	94.062	1883.665	2.84%	60.39%
19.0	2406.679	89.020	1972.685	2.69%	63.24%
20.0	2242.947	85.101	2057.786	2.57%	65.97%
21.0	2068.236	82.783	2140.57	2.50%	68.62%
22.0	1863.584	79.012	2219.581	2.39%	71.16%
23.0	1724.503	75.288	2294.869	2.27%	73.57%
24.0	1582.079	72.294	2367.163	2.18%	75.89%
25.0	1425.968	68.396	2435.559	2.07%	78.08%
26.0	1338.005	65.244	2500.803	1.97%	80.17%
27.0	1196.014	61.995	2562.798	1.87%	82.16%
28.0	1087.650	57.818	2620.616	1.75%	84.01%
29.0	978.477	54.056	2674.671	1.63%	85.75%
30.0	868.451	49.867	2724.538	1.51%	87.34%
31.0	757.202	45.240	2769.778	1.37%	88.79%
32.0	651.151	40.348	2810.125	1.22%	90.09%
33.0	554.929	35.532	2845.657	1.07%	91.23%
34.0	471.354	31.058	2876.715	0.94%	92.22%
35.0	400.395	27.073	2903.789	0.82%	93.09%
36.0	340.993	23.606	2927.394	0.71%	93.85%
37.0	282.471	20.334	2947.728	0.61%	94.50%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	245.224	17.614	2965.342	0.53%	95.06%
39.0	200.762	15.223	2980.565	0.46%	95.55%
40.0	180.480	13.296	2993.861	0.40%	95.98%
41.0	138.824	11.370	3005.231	0.34%	96.34%
42.0	118.450	9.347	3014.579	0.28%	96.64%
43.0	101.702	8.155	3022.734	0.25%	96.90%
44.0	84.875	7.042	3029.776	0.21%	97.13%
45.0	73.699	6.094	3035.87	0.18%	97.32%
46.0	64.238	5.394	3041.264	0.16%	97.50%
47.0	56.268	4.793	3046.057	0.14%	97.65%
48.0	50.401	4.312	3050.369	0.13%	97.79%
49.0	45.743	3.948	3054.317	0.12%	97.92%
50.0	42.339	3.672	3057.99	0.11%	98.03%
51.0	39.435	3.460	3061.45	0.10%	98.14%
52.0	37.352	3.295	3064.745	0.10%	98.25%
53.0	35.631	3.175	3067.919	0.10%	98.35%
54.0	34.369	3.085	3071.005	0.09%	98.45%
55.0	33.252	3.019	3074.023	0.09%	98.55%
56.0	32.431	2.968	3076.991	0.09%	98.64%
57.0	31.813	2.937	3079.929	0.09%	98.74%
58.0	31.156	2.912	3082.841	0.09%	98.83%
59.0	30.263	2.871	3085.712	0.09%	98.92%
60.0	29.238	2.811	3088.523	0.08%	99.01%
61.0	27.838	2.724	3091.247	0.08%	99.10%
62.0	26.064	2.597	3093.844	0.08%	99.18%
63.0	24.014	2.436	3096.28	0.07%	99.26%
64.0	22.043	2.260	3098.54	0.07%	99.33%
65.0	19.770	2.069	3100.609	0.06%	99.40%
66.0	17.484	1.859	3102.468	0.06%	99.46%
67.0	15.664	1.667	3104.135	0.05%	99.51%
68.0	13.896	1.497	3105.632	0.05%	99.56%
69.0	12.457	1.344	3106.976	0.04%	99.60%
70.0	11.281	1.219	3108.196	0.04%	99.64%
71.0	10.355	1.118	3109.314	0.03%	99.68%
72.0	9.474	1.031	3110.345	0.03%	99.71%
73.0	8.771	0.954	3111.299	0.03%	99.74%
74.0	8.095	0.887	3112.186	0.03%	99.77%
75.0	7.549	0.827	3113.012	0.02%	99.80%

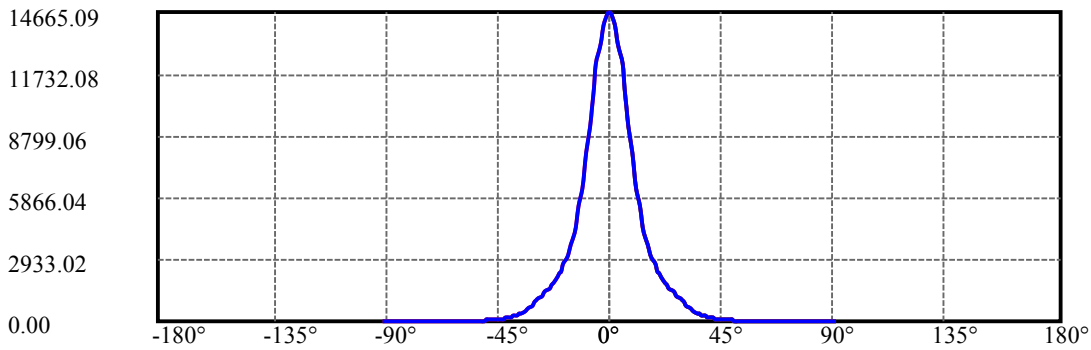
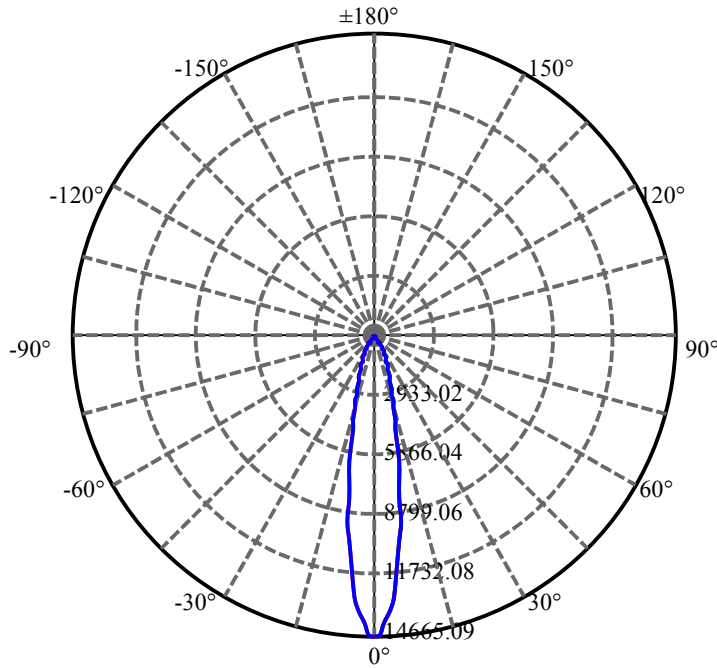
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	6.892	0.767	3113.779	0.02%	99.82%
77.0	6.393	0.708	3114.487	0.02%	99.84%
78.0	5.867	0.656	3115.143	0.02%	99.87%
79.0	5.355	0.603	3115.746	0.02%	99.89%
80.0	4.901	0.553	3116.299	0.02%	99.90%
81.0	4.376	0.502	3116.801	0.02%	99.92%
82.0	3.916	0.450	3117.251	0.01%	99.93%
83.0	3.463	0.401	3117.652	0.01%	99.95%
84.0	3.022	0.353	3118.005	0.01%	99.96%
85.0	2.608	0.307	3118.312	0.01%	99.97%
86.0	2.267	0.266	3118.579	0.01%	99.98%
87.0	1.925	0.229	3118.808	0.01%	99.98%
88.0	1.649	0.196	3119.004	0.01%	99.99%
89.0	1.439	0.169	3119.173	0.01%	100.00%
90.0	1.321	0.151	3119.325	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2724.54	82.29%	87.34%
0-40	2993.86	90.42%	95.98%
0-60	3088.52	93.28%	99.01%
0-90	3119.17	94.21%	100.00%
0-120	3119.17	94.21%	100.00%
0-180	3119.32	94.21%	100.00%
60-90	30.65	0.93%	0.98%
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%
0-25.92	2495.46	75.37%	80.00%

ZONAL LUMEN SUMMARY

0-10	985.22
10-20	1072.57
20-30	666.75
30-40	269.32
40-50	64.13
50-60	30.53
60-70	19.67
70-80	8.10
80-90	2.87
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



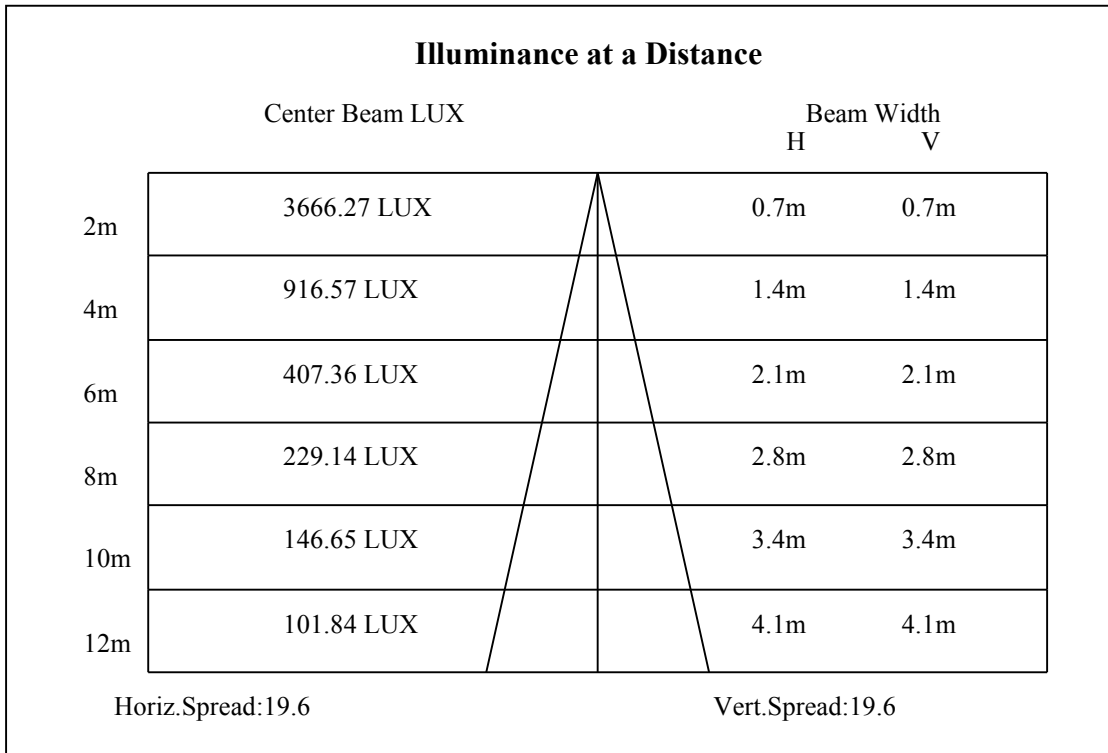
C0(Max): —————

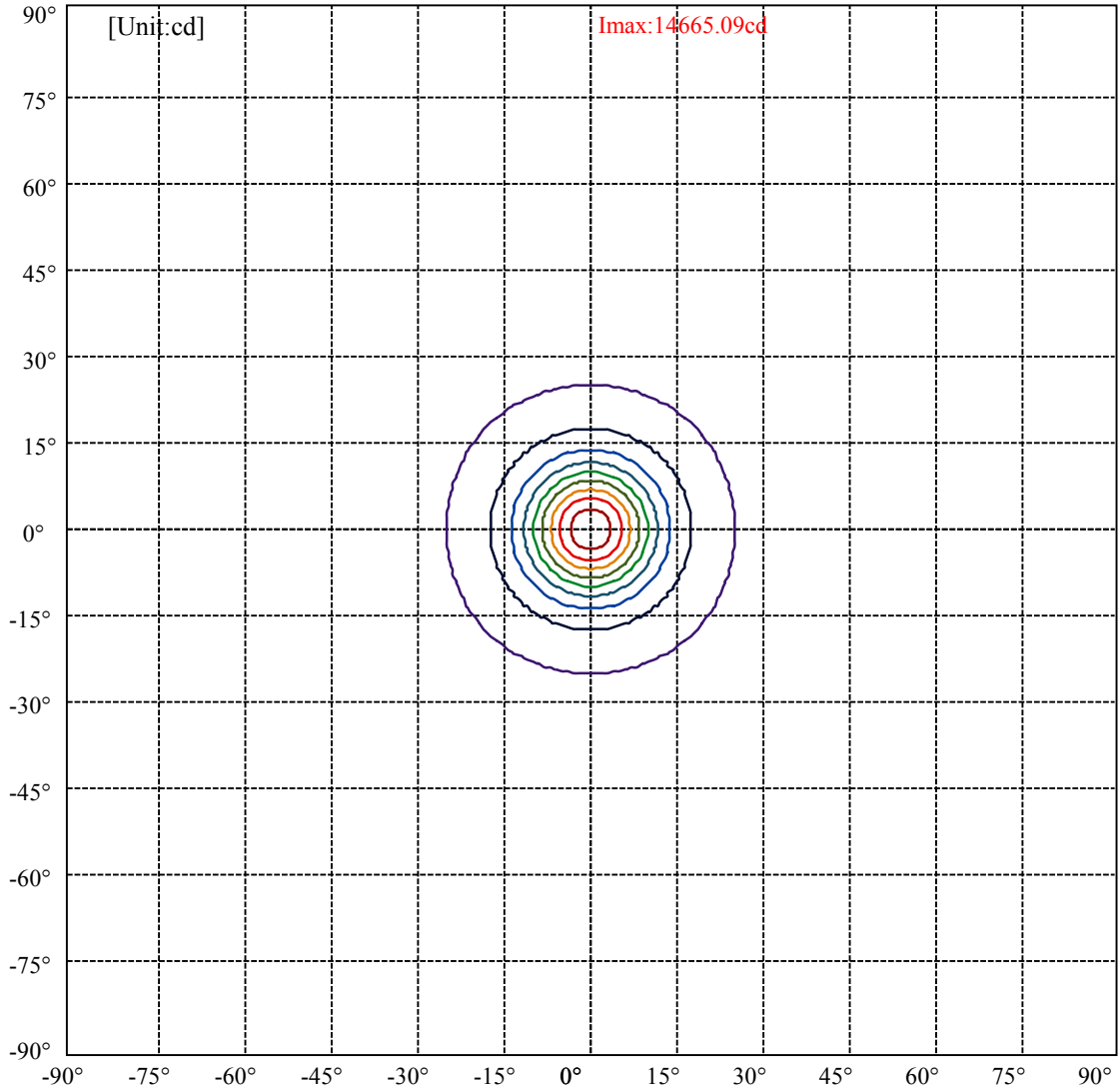
C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:24.7 Right:24.7  
:C90/270Left:24.7 Right:24.7

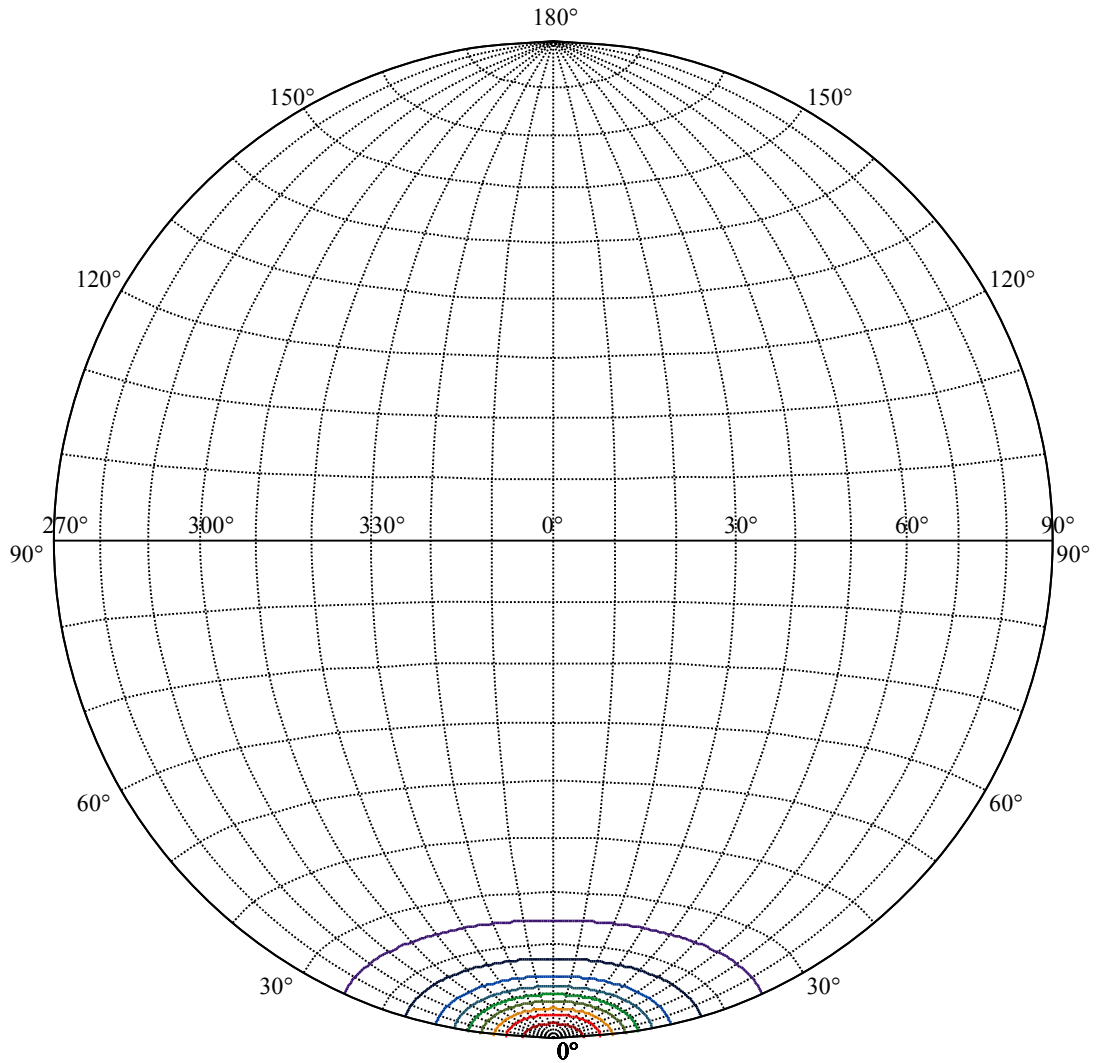
Beam Angle(50%Imax):C0/180Left:9.8 Right:9.8  
:C90/270Left:9.8 Right:9.8





(10%Imax) 1466.51	—
(20%Imax) 2933.02	—
(30%Imax) 4399.53	—
(40%Imax) 5866.04	—
(50%Imax) 7332.55	—
(60%Imax) 8799.06	—
(70%Imax) 10265.6	—
(80%Imax) 11732.1	—
(90%Imax) 13198.6	—





House

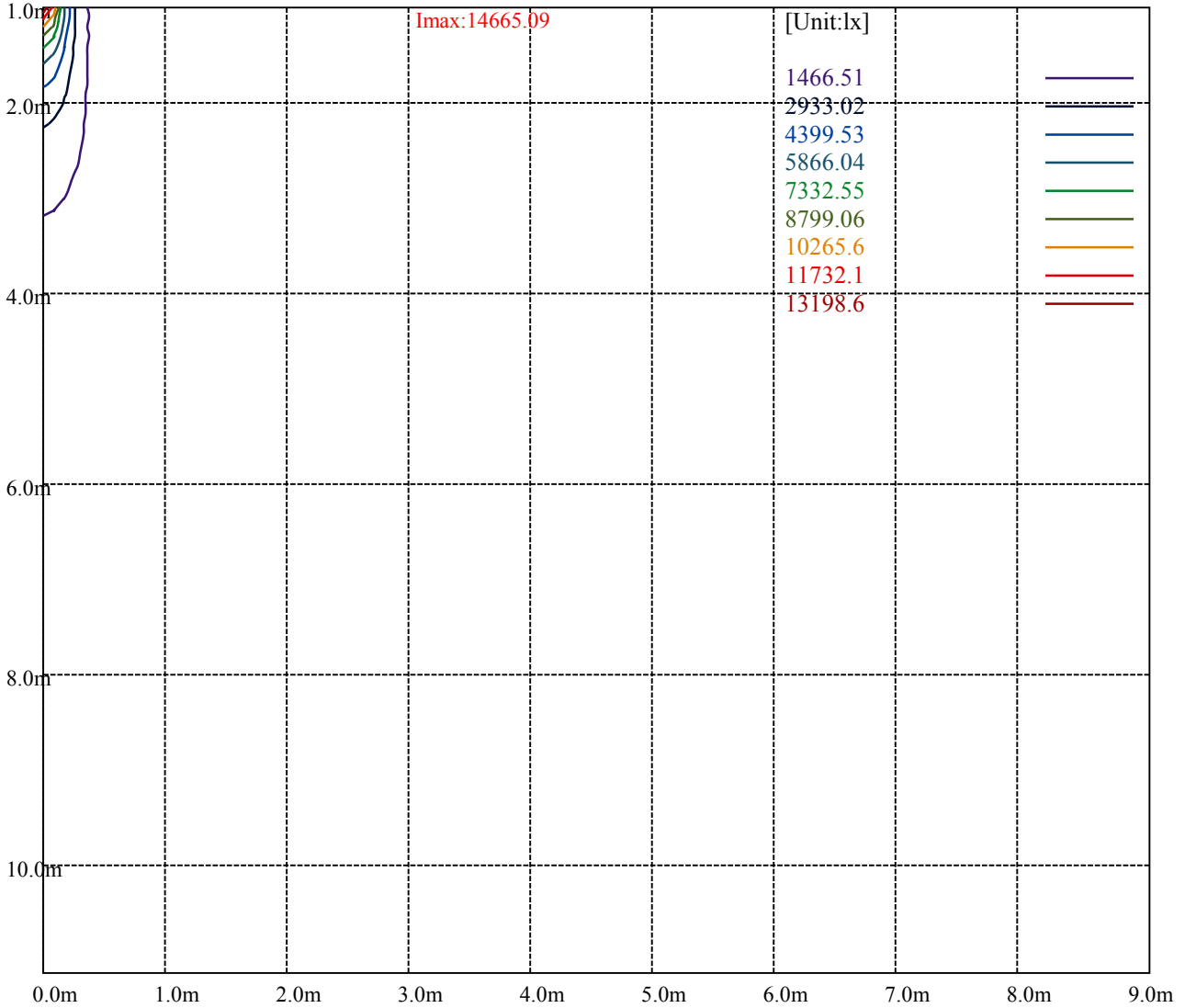
[Unit:cd]

Road

**Imax:14665.09**

(10%Imax)	1466.51	—
(20%Imax)	2933.02	—
(30%Imax)	4399.53	—
(40%Imax)	5866.04	—
(50%Imax)	7332.55	—
(60%Imax)	8799.06	—
(70%Imax)	10265.6	—
(80%Imax)	11732.1	—
(90%Imax)	13198.6	—





Luminance Table

$\gamma$	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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



Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions	Viewed crosswise					Viewed endwise					
X	Y										
2H	2H										
	3H										
	4H										
	6H										
	8H										
	12H										
4H	2H										
	3H										
	4H										
	6H										
	8H										
	12H										
8H	4H										
	6H										
	8H										
	12H										
12H	4H										
	6H										
	8H										
Variation with the observer position at spacings:											
S = 1.0H											
S = 1.5H											
S = 2.0H											
Standard tables:											
Uncorrected UGR											