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## Nata

Client:

LumCAT: 2-2756-L

Luminaire: 92.70.411.00

Report No: 2024830-B021

Ballast type: AC

Test No: 2024830-C021

Voltage(V): 36.460

LampCAT: LUMILEDS LUXEON CoB 1205 Current(A): 0.598

Lamp flux(lm): 2555.0 Power (W): 21.800

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

Lumens(lm): 2349.92, Efficiency(%): 91.97% , Luminous Efficacy(lm/W): 107.79

Central intensity(cd): 5434.437, Maximum intensity(cd): 5434.437

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=65.6

[C90/270]Total=65.6

Maximum s/h(1/2): C0\_180=0.56 C90\_270=0.56

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(%): 91.97%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 99.335%

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Equipment: GMS 1800  
Temperature(°C): 25.0

Date: 2024/8/30  
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	5434.437	0.000	0	0.00%	0.00%
1.0	5411.106	5.189	5.189	0.20%	0.22%
2.0	5355.527	15.453	20.643	0.60%	0.88%
3.0	5267.006	25.406	46.048	0.99%	1.96%
4.0	5176.256	34.957	81.005	1.37%	3.45%
5.0	5031.959	43.915	124.92	1.72%	5.32%
6.0	4870.868	52.042	176.962	2.04%	7.53%
7.0	4715.073	59.500	236.462	2.33%	10.06%
8.0	4530.033	66.165	302.628	2.59%	12.88%
9.0	4352.221	71.986	374.613	2.82%	15.94%
10.0	4157.911	77.014	451.627	3.01%	19.22%
11.0	3960.394	81.119	532.746	3.17%	22.67%
12.0	3768.521	84.488	617.234	3.31%	26.27%
13.0	3575.052	87.150	704.383	3.41%	29.97%
14.0	3377.397	88.991	793.374	3.48%	33.76%
15.0	3179.814	90.020	883.394	3.52%	37.59%
16.0	2992.613	90.443	973.838	3.54%	41.44%
17.0	2774.893	89.816	1063.653	3.52%	45.26%
18.0	2600.503	88.629	1152.282	3.47%	49.03%
19.0	2426.173	87.454	1239.736	3.42%	52.76%
20.0	2245.858	85.511	1325.247	3.35%	56.40%
21.0	2103.032	83.507	1408.754	3.27%	59.95%
22.0	1955.936	81.567	1490.321	3.19%	63.42%
23.0	1810.167	79.023	1569.344	3.09%	66.78%
24.0	1663.143	75.939	1645.283	2.97%	70.01%
25.0	1532.282	72.657	1717.94	2.84%	73.11%
26.0	1378.596	68.712	1786.652	2.69%	76.03%
27.0	1262.584	64.617	1851.269	2.53%	78.78%
28.0	1145.954	60.979	1912.248	2.39%	81.37%
29.0	1028.812	56.898	1969.146	2.23%	83.80%
30.0	896.283	51.977	2021.123	2.03%	86.01%
31.0	762.209	46.153	2067.277	1.81%	87.97%
32.0	636.059	40.059	2107.335	1.57%	89.68%
33.0	524.285	34.184	2141.519	1.34%	91.13%
34.0	430.559	28.896	2170.416	1.13%	92.36%
35.0	355.894	24.424	2194.84	0.96%	93.40%
36.0	299.291	20.861	2215.701	0.82%	94.29%
37.0	255.480	18.094	2233.795	0.71%	95.06%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	218.423	15.818	2249.613	0.62%	95.73%
39.0	182.412	13.682	2263.295	0.54%	96.31%
40.0	136.945	11.138	2274.433	0.44%	96.79%
41.0	110.112	8.798	2283.23	0.34%	97.16%
42.0	89.402	7.249	2290.479	0.28%	97.47%
43.0	73.686	6.041	2296.52	0.24%	97.73%
44.0	59.363	5.022	2301.542	0.20%	97.94%
45.0	49.842	4.197	2305.739	0.16%	98.12%
46.0	41.853	3.586	2309.325	0.14%	98.27%
47.0	35.828	3.090	2312.414	0.12%	98.40%
48.0	31.163	2.708	2315.123	0.11%	98.52%
49.0	27.497	2.409	2317.531	0.09%	98.62%
50.0	24.540	2.170	2319.701	0.08%	98.71%
51.0	22.142	1.975	2321.676	0.08%	98.80%
52.0	20.164	1.815	2323.491	0.07%	98.88%
53.0	18.384	1.677	2325.168	0.07%	98.95%
54.0	16.965	1.558	2326.726	0.06%	99.01%
55.0	15.716	1.459	2328.185	0.06%	99.07%
56.0	14.494	1.365	2329.55	0.05%	99.13%
57.0	13.666	1.288	2330.838	0.05%	99.19%
58.0	12.681	1.218	2332.056	0.05%	99.24%
59.0	11.945	1.151	2333.207	0.05%	99.29%
60.0	11.222	1.094	2334.302	0.04%	99.34%
61.0	10.664	1.044	2335.346	0.04%	99.38%
62.0	10.020	0.997	2336.343	0.04%	99.42%
63.0	9.455	0.947	2337.29	0.04%	99.46%
64.0	8.975	0.904	2338.194	0.04%	99.50%
65.0	8.495	0.865	2339.059	0.03%	99.54%
66.0	8.134	0.830	2339.889	0.03%	99.57%
67.0	7.700	0.796	2340.685	0.03%	99.61%
68.0	7.300	0.760	2341.445	0.03%	99.64%
69.0	6.938	0.726	2342.171	0.03%	99.67%
70.0	6.577	0.694	2342.865	0.03%	99.70%
71.0	6.209	0.661	2343.526	0.03%	99.73%
72.0	5.854	0.627	2344.153	0.02%	99.75%
73.0	5.545	0.596	2344.749	0.02%	99.78%
74.0	5.197	0.565	2345.314	0.02%	99.80%
75.0	4.849	0.531	2345.845	0.02%	99.83%

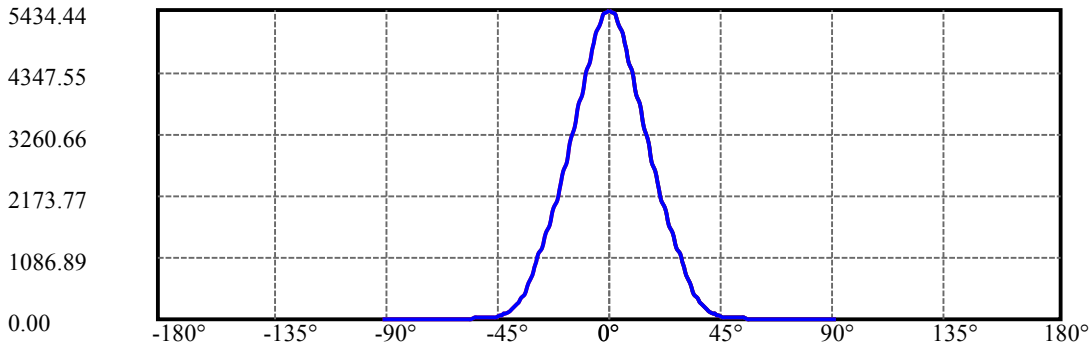
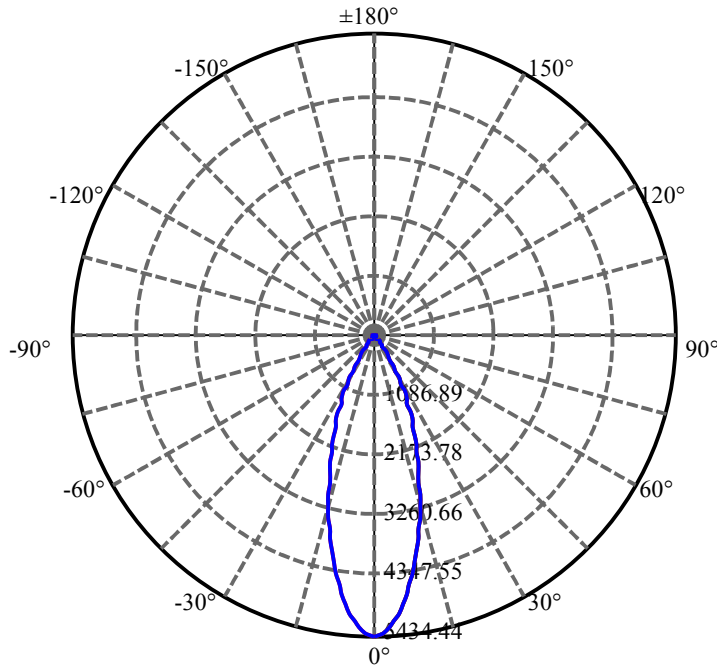
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.520	0.497	2346.342	0.02%	99.85%
77.0	4.205	0.465	2346.808	0.02%	99.87%
78.0	3.883	0.433	2347.241	0.02%	99.89%
79.0	3.515	0.398	2347.638	0.02%	99.90%
80.0	3.206	0.362	2348	0.01%	99.92%
81.0	2.871	0.329	2348.329	0.01%	99.93%
82.0	2.516	0.292	2348.621	0.01%	99.94%
83.0	2.208	0.257	2348.878	0.01%	99.96%
84.0	1.919	0.225	2349.103	0.01%	99.97%
85.0	1.649	0.195	2349.298	0.01%	99.97%
86.0	1.452	0.170	2349.467	0.01%	99.98%
87.0	1.222	0.146	2349.613	0.01%	99.99%
88.0	1.018	0.123	2349.736	0.00%	99.99%
89.0	0.848	0.102	2349.838	0.00%	100.00%
90.0	0.729	0.086	2349.925	0.00%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2021.12	79.10%	86.01%
0-40	2274.43	89.02%	96.79%
0-60	2334.30	91.36%	99.34%
0-90	2349.84	91.97%	100.00%
0-120	2349.84	91.97%	100.00%
0-180	2349.92	91.97%	100.00%
60-90	15.54	0.61%	0.66%
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%
0-27.47	1879.94	73.58%	80.00%

ZONAL LUMEN SUMMARY

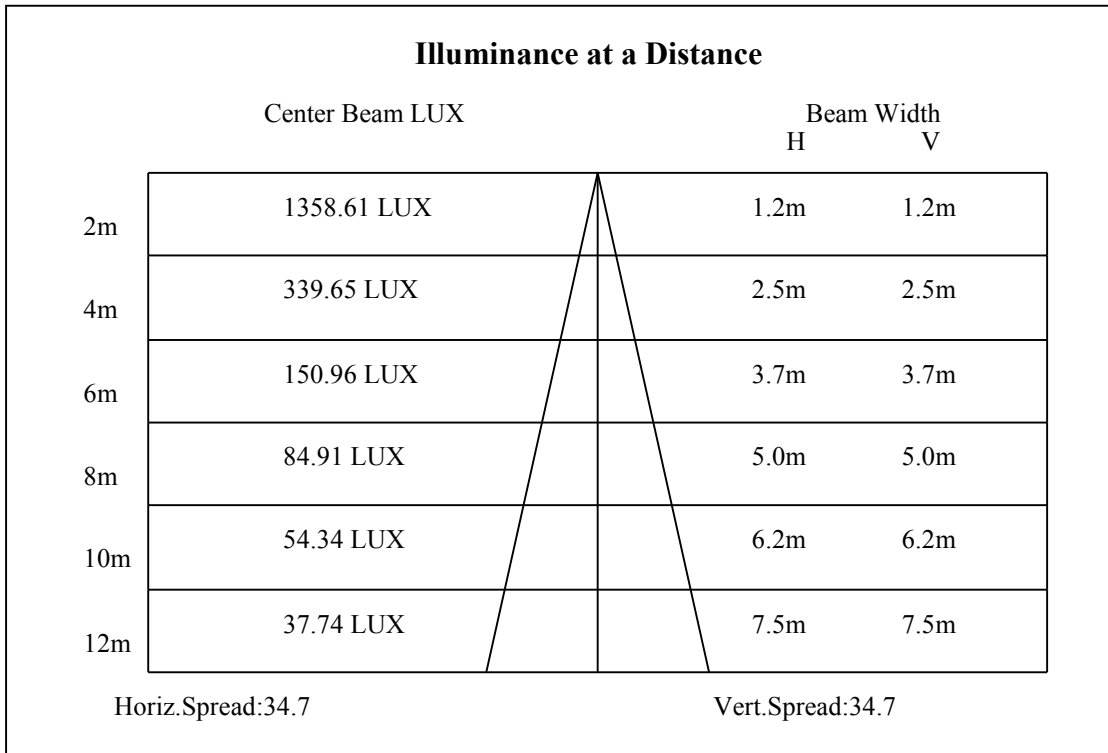
0-10	451.63
10-20	873.62
20-30	695.88
30-40	253.31
40-50	45.27
50-60	14.60
60-70	8.56
70-80	5.14
80-90	1.84
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

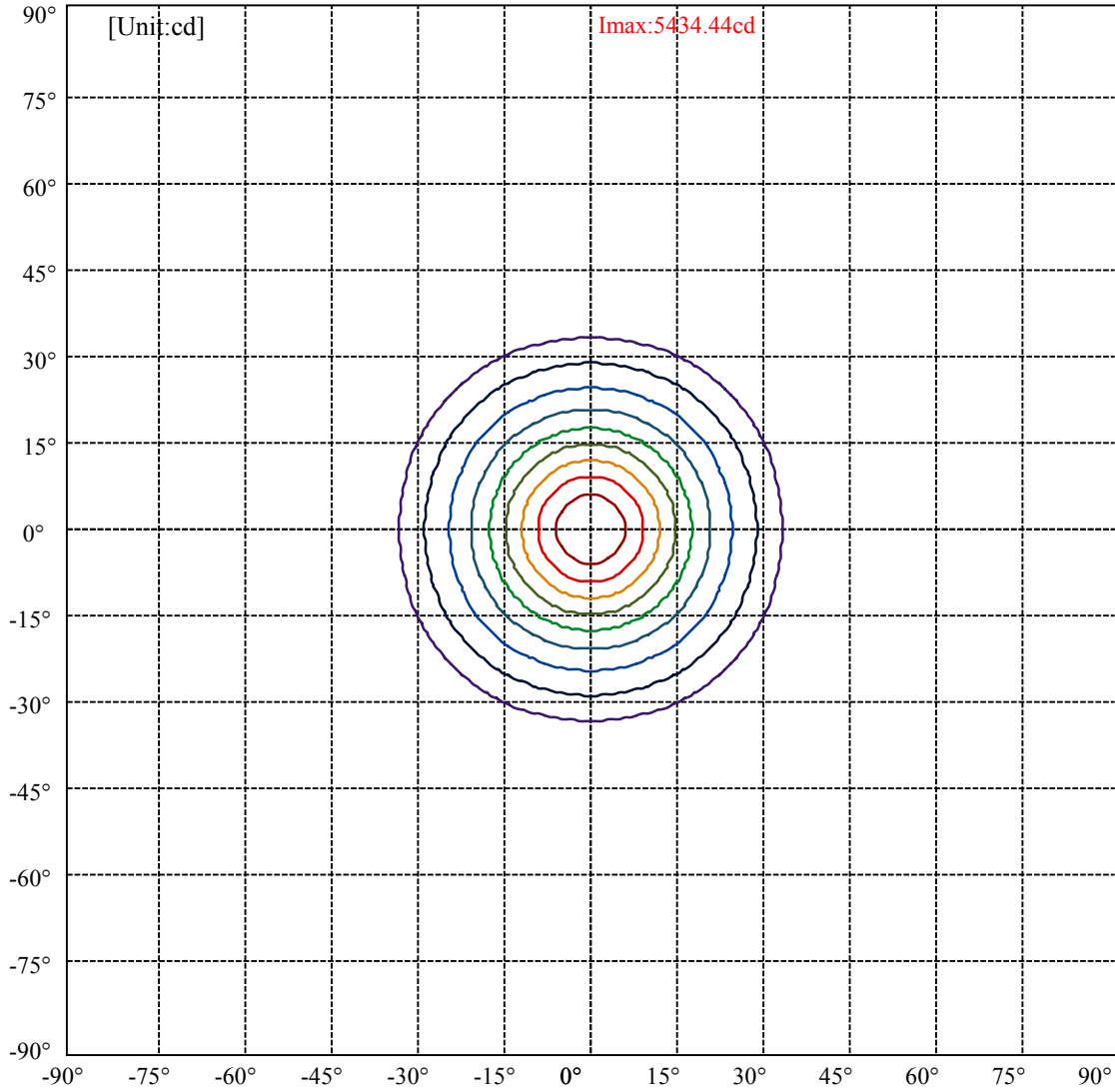


C0(Max): ———  
C0/C180: ———  
C90/C270: ———

Field angle(10%Imax):C0/180Left:32.8 Right:32.8  
:C90/270Left:32.8 Right:32.8

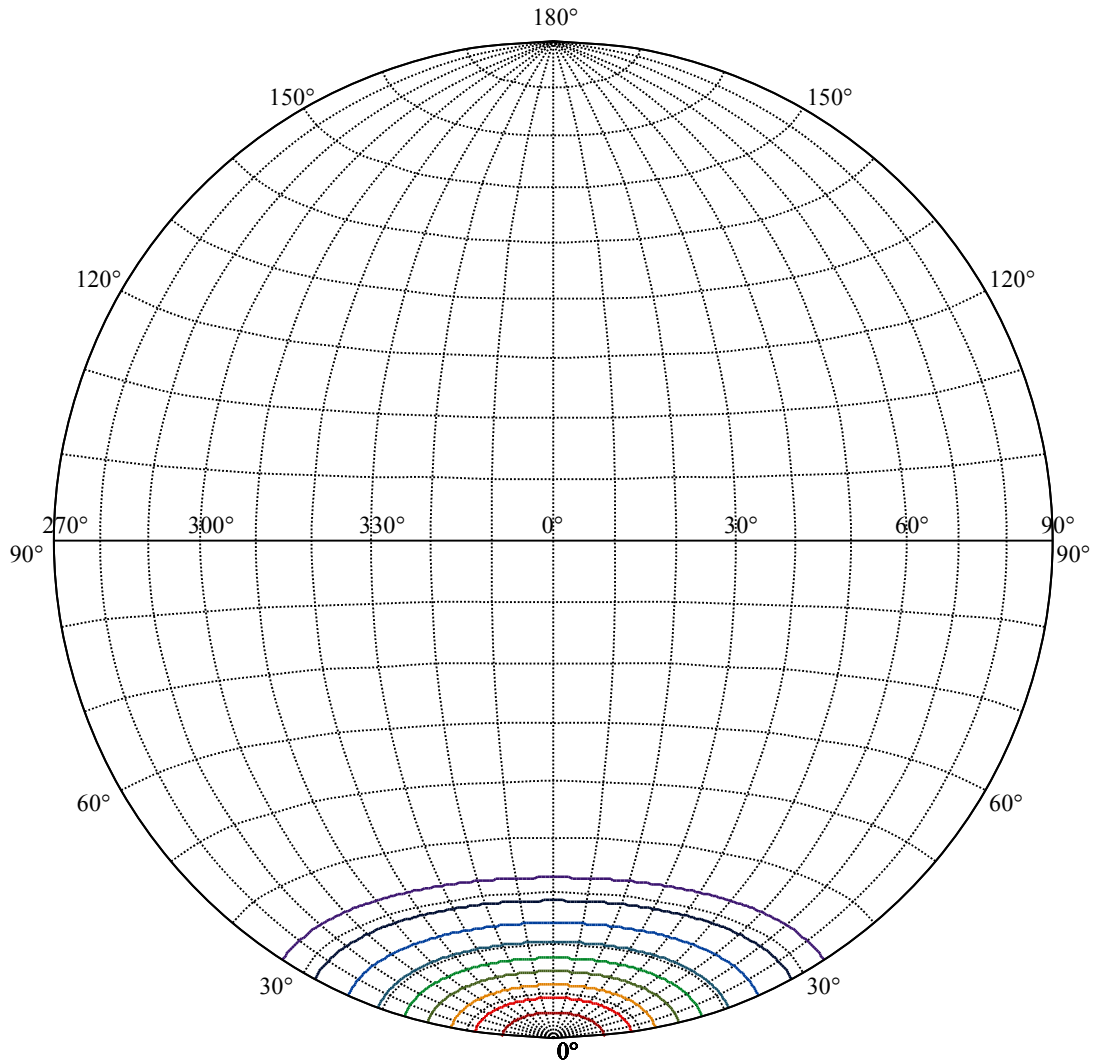
Beam Angle(50%Imax):C0/180Left:17.3 Right:17.3  
:C90/270Left:17.3 Right:17.3





(10%I <sub>max</sub> ) 543.444	—
(20%I <sub>max</sub> ) 1086.89	—
(30%I <sub>max</sub> ) 1630.33	—
(40%I <sub>max</sub> ) 2173.77	—
(50%I <sub>max</sub> ) 2717.22	—
(60%I <sub>max</sub> ) 3260.66	—
(70%I <sub>max</sub> ) 3804.11	—
(80%I <sub>max</sub> ) 4347.55	—
(90%I <sub>max</sub> ) 4890.99	—





House

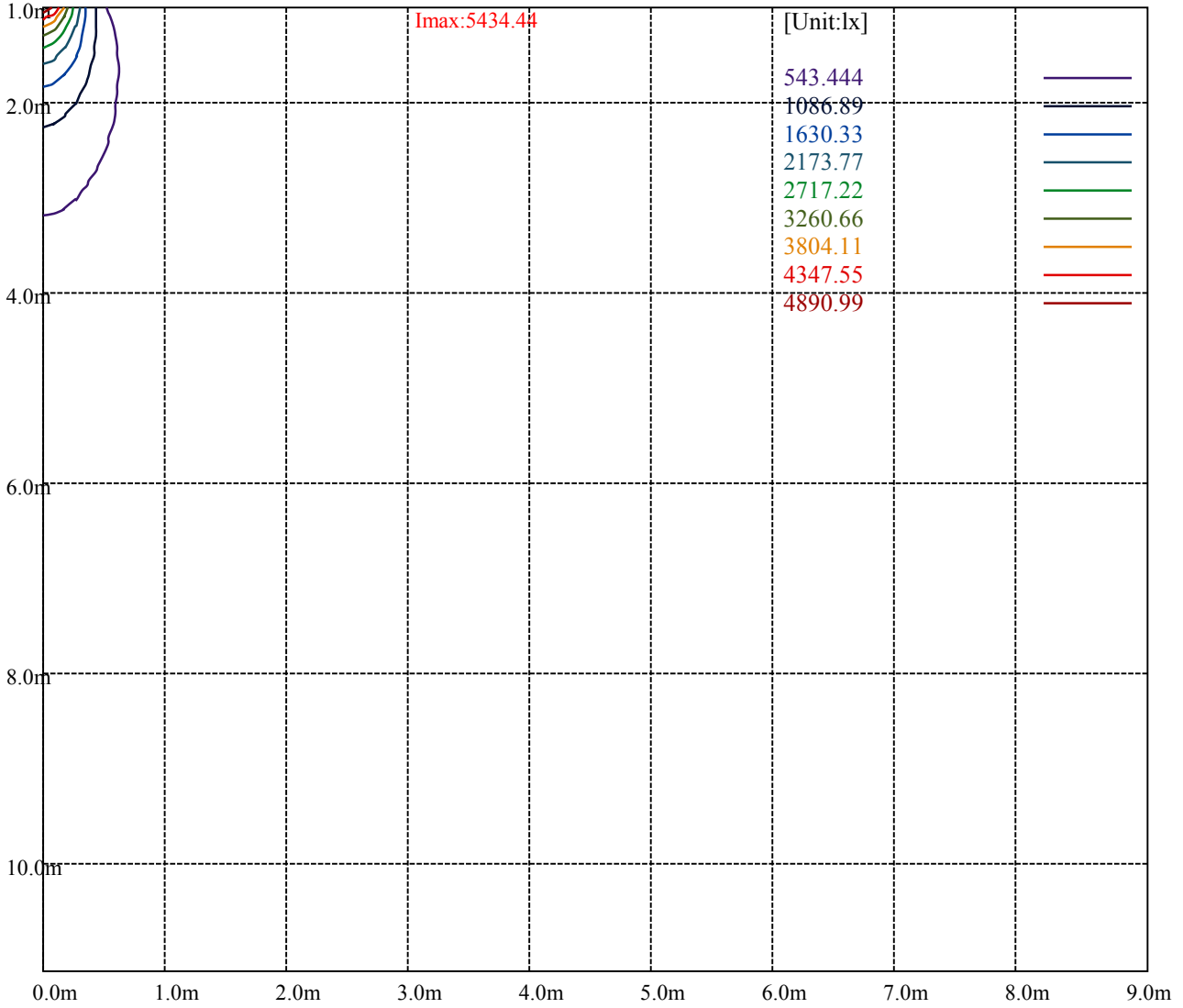
[Unit:cd]

Road

I<sub>max</sub>:5434.44

(10%I <sub>max</sub> )	543.444	—
(20%I <sub>max</sub> )	1086.89	—
(30%I <sub>max</sub> )	1630.33	—
(40%I <sub>max</sub> )	2173.77	—
(50%I <sub>max</sub> )	2717.22	—
(60%I <sub>max</sub> )	3260.66	—
(70%I <sub>max</sub> )	3804.11	—
(80%I <sub>max</sub> )	4347.55	—
(90%I <sub>max</sub> )	4890.99	—





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											