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Nata

Client:

LumCAT: 2-2752-L

Luminaire: 92.70.412.00

Report No: 2024815-B010

Ballast type: AC

Test No: 2024817-C010

LampCAT: CREE CXA1830 LES14

Lamp flux(lm): 3731.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 36.480

Current(A): 0.795

Power (W): 29.000

PF: 0.000

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 3447.94, Efficiency(%): 92.41% , Luminous Efficacy(lm/W): 118.89

Central intensity(cd): 13578.630, Maximum intensity(cd): 13578.630

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.8

[C90/270]Total=23.8

Field angle(10%Imax): [C0/180]Total=53.4

[C90/270]Total=53.4

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.42 C90_270=0.42

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 92.41%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 99.286%

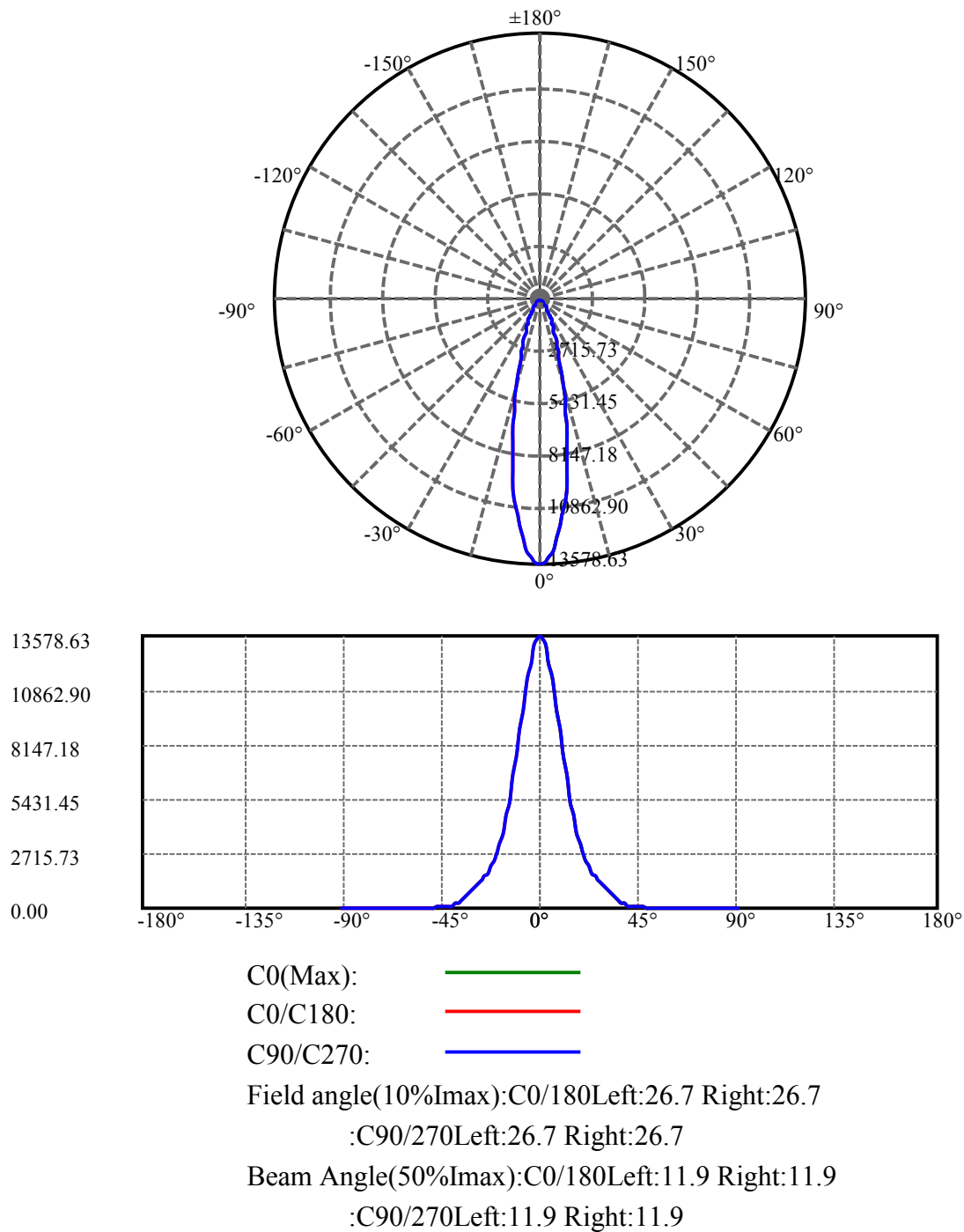
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	13578.628	0.000	0	0.00%	0.00%
1.0	13499.929	12.957	12.957	0.35%	0.38%
2.0	13283.332	38.442	51.398	1.03%	1.49%
3.0	12929.534	62.693	114.091	1.68%	3.31%
4.0	12230.781	84.220	198.311	2.26%	5.75%
5.0	11610.866	102.566	300.876	2.75%	8.73%
6.0	11109.419	119.401	420.277	3.20%	12.19%
7.0	10483.656	134.028	554.305	3.59%	16.08%
8.0	9797.440	145.148	699.453	3.89%	20.29%
9.0	8968.036	152.084	851.537	4.08%	24.70%
10.0	8165.098	155.049	1006.586	4.16%	29.19%
11.0	7468.363	156.210	1162.796	4.19%	33.72%
12.0	6673.565	154.592	1317.388	4.14%	38.21%
13.0	5916.455	149.412	1466.799	4.00%	42.54%
14.0	5266.592	143.142	1609.941	3.84%	46.69%
15.0	4654.758	136.205	1746.146	3.65%	50.64%
16.0	4081.163	128.006	1874.152	3.43%	54.36%
17.0	3588.698	119.440	1993.592	3.20%	57.82%
18.0	3171.391	111.459	2105.051	2.99%	61.05%
19.0	2836.877	104.532	2209.583	2.80%	64.08%
20.0	2578.979	99.125	2308.708	2.66%	66.96%
21.0	2332.231	94.305	2403.013	2.53%	69.69%
22.0	2087.257	88.811	2491.825	2.38%	72.27%
23.0	1855.581	82.731	2574.556	2.22%	74.67%
24.0	1700.765	77.754	2652.311	2.08%	76.92%
25.0	1566.619	74.293	2726.604	1.99%	79.08%
26.0	1453.787	71.297	2797.901	1.91%	81.15%
27.0	1320.311	67.869	2865.77	1.82%	83.12%
28.0	1208.491	64.024	2929.794	1.72%	84.97%
29.0	1132.820	61.255	2991.049	1.64%	86.75%
30.0	1038.366	58.622	3049.67	1.57%	88.45%
31.0	918.063	54.445	3104.115	1.46%	90.03%
32.0	801.059	49.251	3153.366	1.32%	91.46%
33.0	674.515	43.471	3196.837	1.17%	92.72%
34.0	563.555	37.468	3234.304	1.00%	93.80%
35.0	452.609	31.558	3265.863	0.85%	94.72%
36.0	356.505	25.762	3291.625	0.69%	95.47%
37.0	278.575	20.713	3312.338	0.56%	96.07%

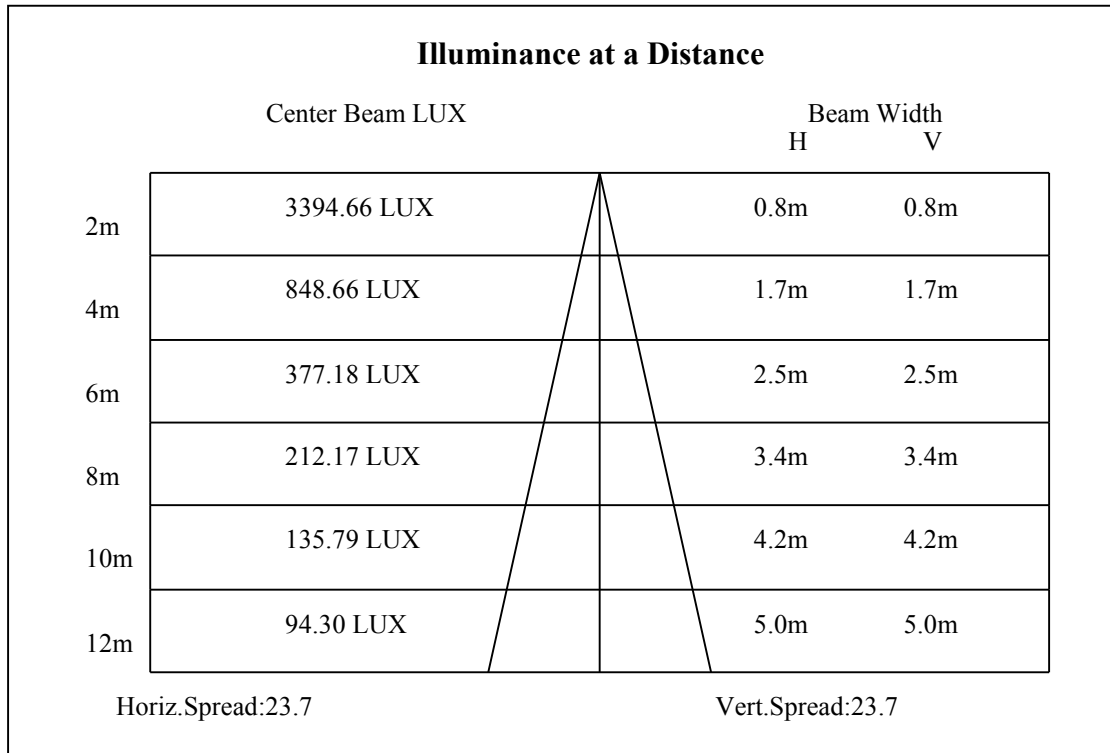
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	214.540	16.460	3328.797	0.44%	96.54%
39.0	163.200	12.893	3341.691	0.35%	96.92%
40.0	116.669	9.761	3351.452	0.26%	97.20%
41.0	87.503	7.270	3358.722	0.19%	97.41%
42.0	75.775	5.932	3364.654	0.16%	97.58%
43.0	68.239	5.335	3369.989	0.14%	97.74%
44.0	60.210	4.848	3374.837	0.13%	97.88%
45.0	54.271	4.400	3379.237	0.12%	98.01%
46.0	49.626	4.063	3383.3	0.11%	98.13%
47.0	45.158	3.770	3387.07	0.10%	98.23%
48.0	41.590	3.507	3390.576	0.09%	98.34%
49.0	38.870	3.304	3393.881	0.09%	98.43%
50.0	36.505	3.143	3397.023	0.08%	98.52%
51.0	34.586	3.008	3400.031	0.08%	98.61%
52.0	33.062	2.903	3402.934	0.08%	98.69%
53.0	31.774	2.820	3405.754	0.08%	98.78%
54.0	30.605	2.749	3408.503	0.07%	98.86%
55.0	29.290	2.674	3411.177	0.07%	98.93%
56.0	28.200	2.598	3413.775	0.07%	99.01%
57.0	27.043	2.526	3416.301	0.07%	99.08%
58.0	25.815	2.444	3418.745	0.07%	99.15%
59.0	24.336	2.345	3421.09	0.06%	99.22%
60.0	22.628	2.219	3423.308	0.06%	99.29%
61.0	21.110	2.087	3425.396	0.06%	99.35%
62.0	19.520	1.958	3427.354	0.05%	99.40%
63.0	18.049	1.827	3429.181	0.05%	99.46%
64.0	16.741	1.707	3430.888	0.05%	99.51%
65.0	15.263	1.584	3432.472	0.04%	99.55%
66.0	13.890	1.455	3433.926	0.04%	99.59%
67.0	12.904	1.347	3435.274	0.04%	99.63%
68.0	11.728	1.248	3436.521	0.03%	99.67%
69.0	10.677	1.143	3437.664	0.03%	99.70%
70.0	9.704	1.047	3438.711	0.03%	99.73%
71.0	8.903	0.962	3439.673	0.03%	99.76%
72.0	8.108	0.884	3440.557	0.02%	99.79%
73.0	7.444	0.813	3441.371	0.02%	99.81%
74.0	6.794	0.749	3442.119	0.02%	99.83%
75.0	6.288	0.691	3442.81	0.02%	99.85%

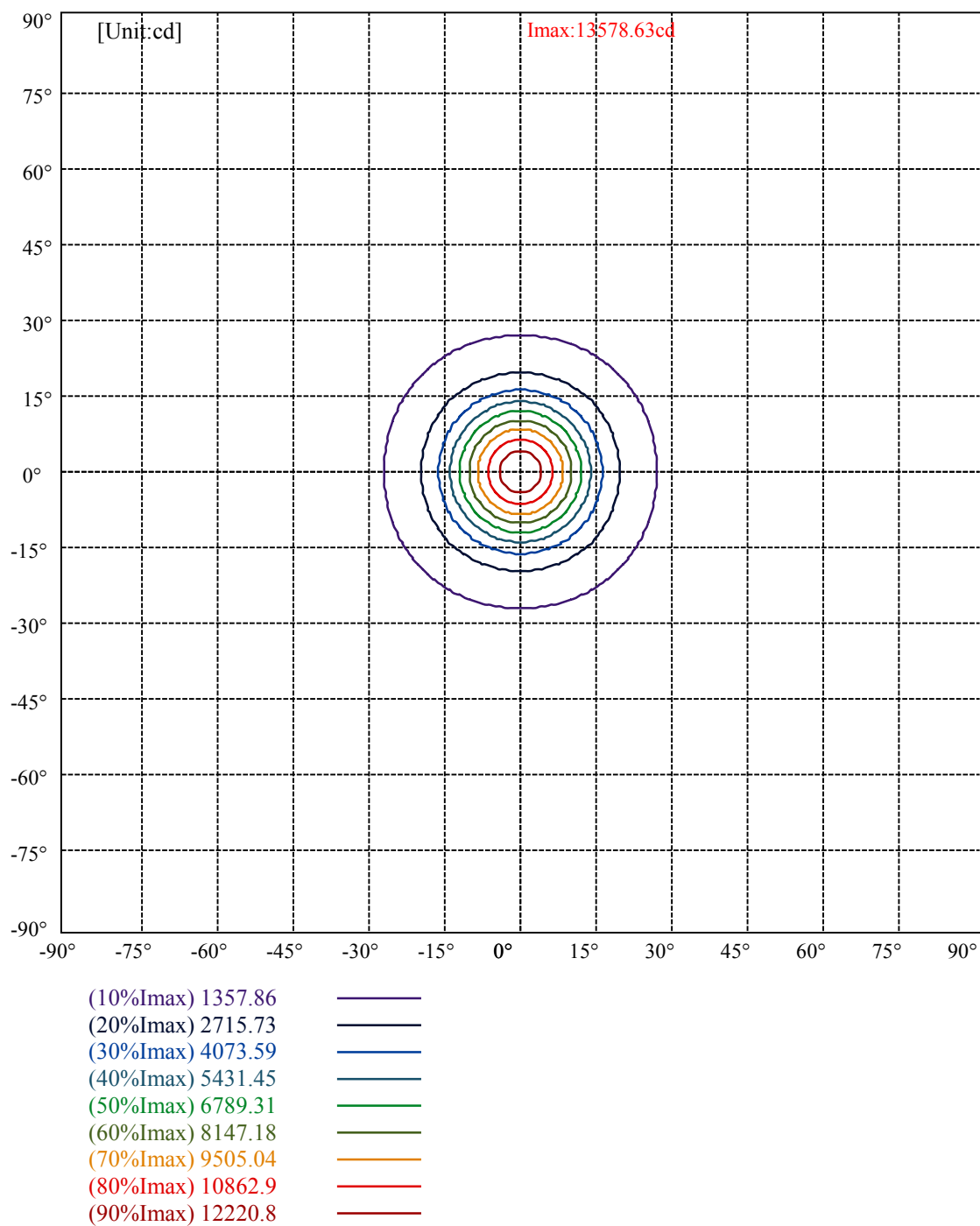
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	5.736	0.638	3443.448	0.02%	99.87%
77.0	5.276	0.587	3444.036	0.02%	99.89%
78.0	4.816	0.540	3444.576	0.01%	99.90%
79.0	4.402	0.495	3445.071	0.01%	99.92%
80.0	3.968	0.451	3445.522	0.01%	99.93%
81.0	3.535	0.406	3445.928	0.01%	99.94%
82.0	3.147	0.362	3446.291	0.01%	99.95%
83.0	2.740	0.320	3446.611	0.01%	99.96%
84.0	2.424	0.281	3446.892	0.01%	99.97%
85.0	2.083	0.246	3447.138	0.01%	99.98%
86.0	1.794	0.212	3447.35	0.01%	99.98%
87.0	1.544	0.183	3447.532	0.00%	99.99%
88.0	1.294	0.155	3447.688	0.00%	99.99%
89.0	1.071	0.130	3447.818	0.00%	100.00%
90.0	1.104	0.119	3447.937	0.00%	100.00%

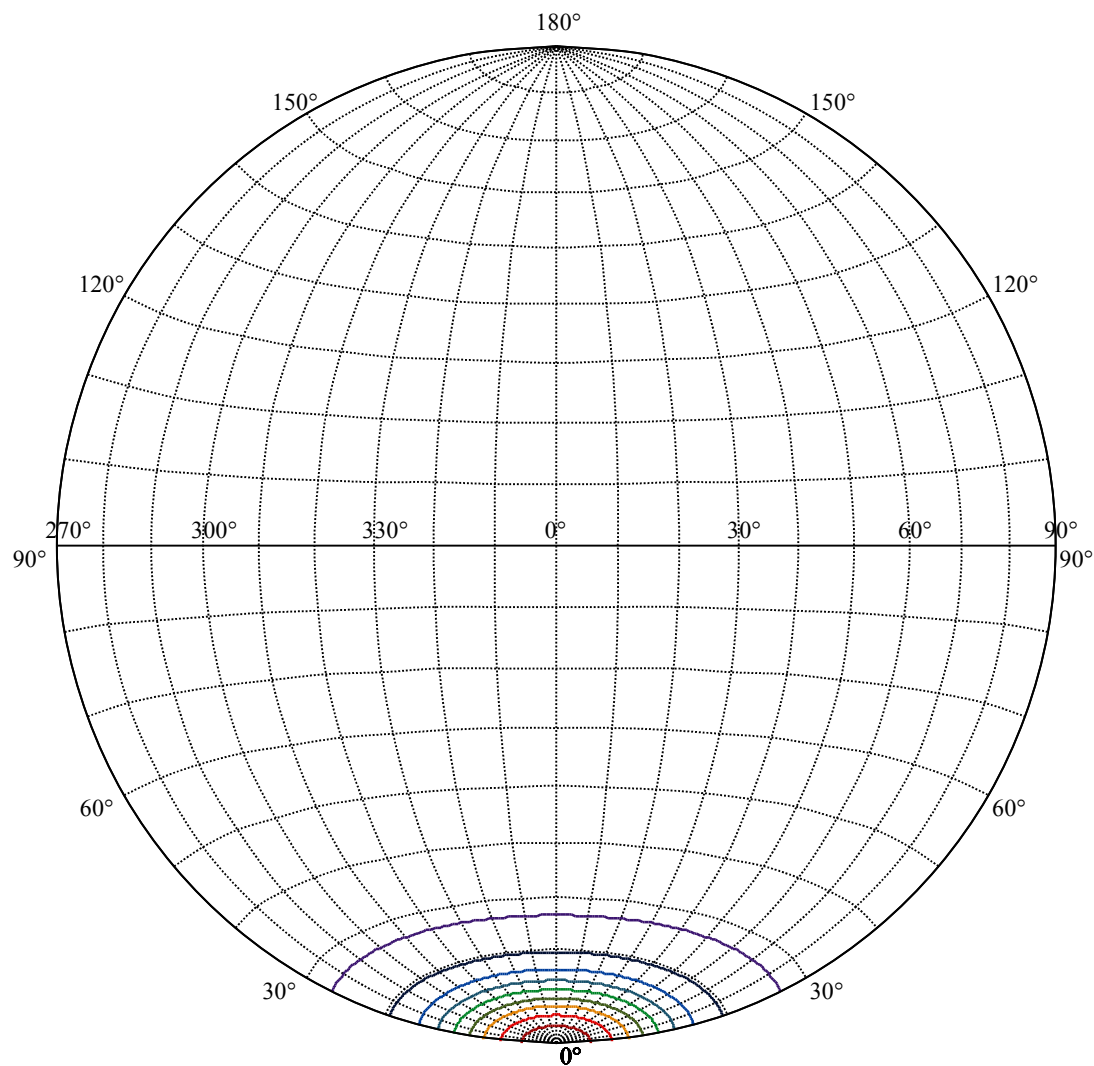
ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	3049.67	81.74%	88.45%
0-40	3351.45	89.83%	97.20%
0-60	3423.31	91.75%	99.29%
0-90	3447.82	92.41%	100.00%
0-120	3447.82	92.41%	100.00%
0-180	3447.94	92.41%	100.00%
60-90	24.51	0.66%	0.71%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-25.45	2758.35	73.93%	80.00%

ZONAL LUMEN SUMMARY	
0-10	1006.59
10-20	1302.12
20-30	740.96
30-40	301.78
40-50	45.57
50-60	26.29
60-70	15.40
70-80	6.81
80-90	2.30
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







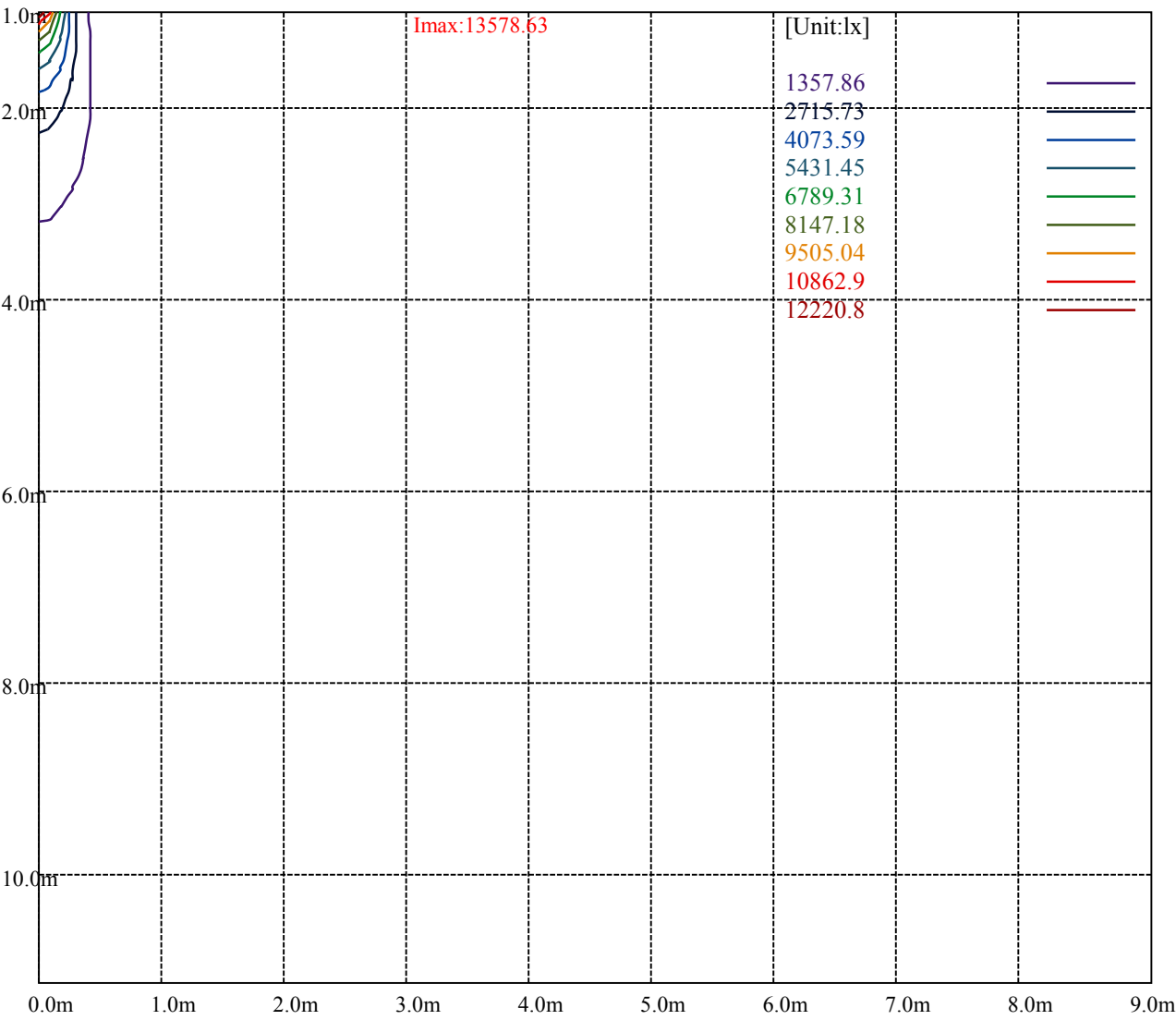


House

[Unit:cd]

Road

Imax:13578.63	
(10%Imax) 1357.86	—
(20%Imax) 2715.73	—
(30%Imax) 4073.59	—
(40%Imax) 5431.45	—
(50%Imax) 6789.31	—
(60%Imax) 8147.18	—
(70%Imax) 9505.04	—
(80%Imax) 10862.9	—
(90%Imax) 12220.8	—



Luminance Limiting Curve(no luminous side)

Luminance Table

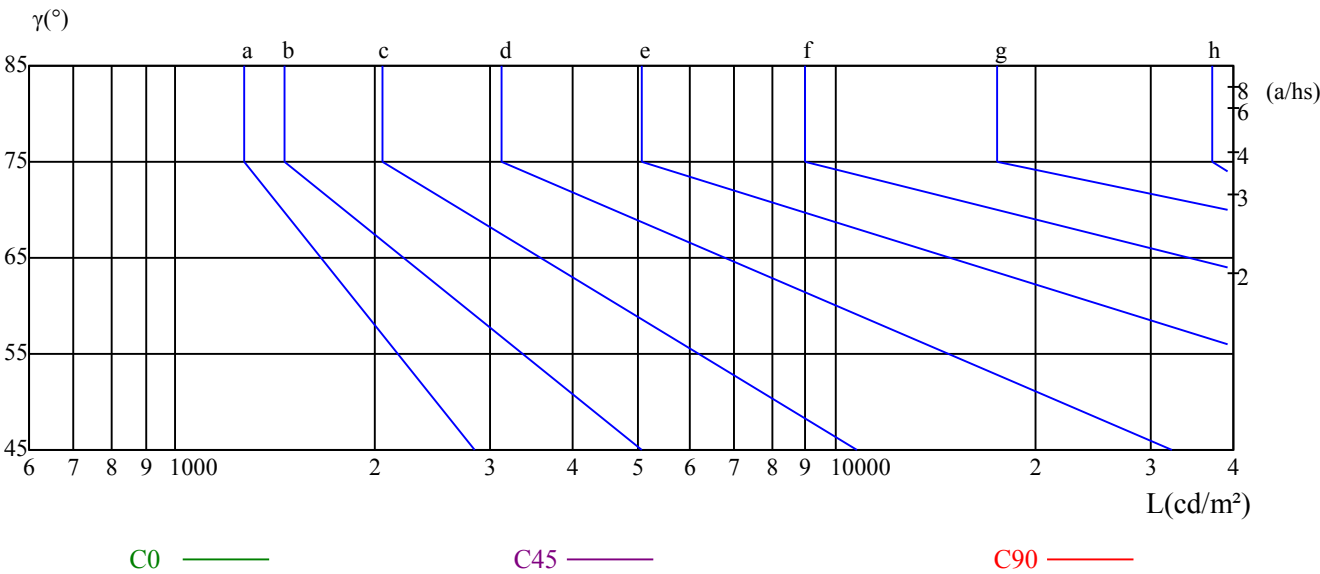
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

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																		
4H	12H																		
	2H																		
	3H																		
	4H																		
	6H																		
8H	8H																		
	12H																		
	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																			