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Nata

LumCAT: 1-0807-S	
Luminaire: 92.70.208.00	
Report No: NATA0100	Voltage(V): 24.9900
Test No: GC2019101007	Current(A): 0.1980
LampCAT: LUMILEDS LUXEON 5050	Power (W): 4.9400
Lamp flux(lm): 536.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 400.19
Efficiency(%): 74.66%
Lumens(lm)/Power(W): 81.01
Central intensity(cd): 154.744
Maximum intensity(cd): 435.263
Angle of maximum intensity: C=90.0 γ =35.0
Beam Angle(50%Imax): [C0/180]Total=59.5
 [C90/270]Total=49.7
Field angle(10%Imax): [C0/180]Total=83.5
 [C90/270]Total=72.2
Maximum s/h(1/2): C0_180=0.76 C90_270=2.34
Maximum s/h(1/4): C0_180=0.79 C90_270=1.93
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 74.66%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 94.486%

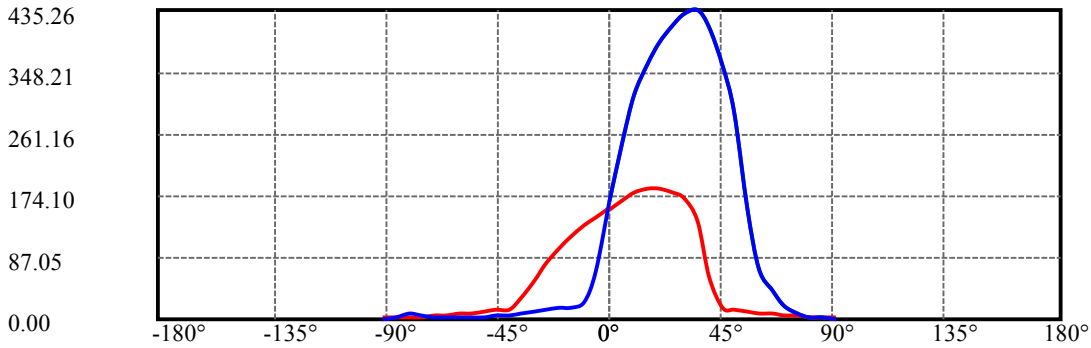
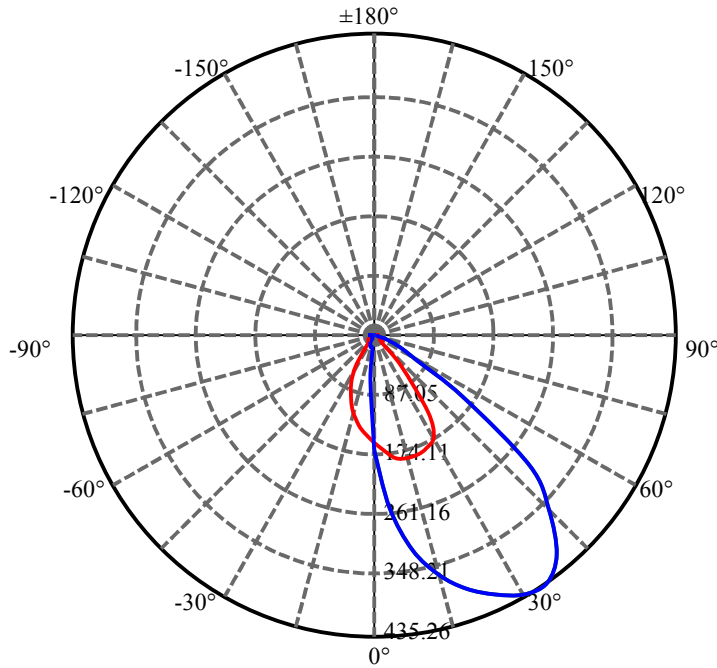
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	156.185	0.000	0	.000%	.000%
5.0	153.766	3.705	3.705	.691%	.926%
10.0	155.735	11.072	14.777	2.066%	3.693%
15.0	165.459	19.053	33.83	3.555%	8.454%
20.0	171.246	27.749	61.58	5.177%	15.388%
25.0	173.714	36.180	97.759	6.750%	24.428%
30.0	172.941	43.869	141.629	8.185%	35.390%
35.0	164.559	49.699	191.328	9.272%	47.809%
40.0	143.016	51.317	242.645	9.574%	60.632%
45.0	116.916	48.128	290.773	8.979%	72.659%
50.0	87.940	41.394	332.167	7.723%	83.002%
55.0	48.368	29.638	361.805	5.529%	90.408%
60.0	22.233	16.319	378.124	3.045%	94.486%
65.0	13.078	8.584	386.708	1.602%	96.631%
70.0	7.516	5.215	391.923	.973%	97.934%
75.0	4.852	3.233	395.156	.603%	98.742%
80.0	3.825	2.322	397.477	.433%	99.322%
85.0	2.370	1.683	399.161	.314%	99.743%
90.0	1.392	1.030	400.191	.192%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	141.63	26.42%	35.39%
0-40	242.64	45.27%	60.63%
0-60	378.12	70.55%	94.49%
0-90	399.16	74.47%	99.74%
0-120	399.16	74.47%	99.74%
0-180	400.19	74.66%	100.00%
60-90	37.36	6.97%	9.33%
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%
0-48.55	320.15	59.73%	80.00%

ZONAL LUMEN SUMMARY

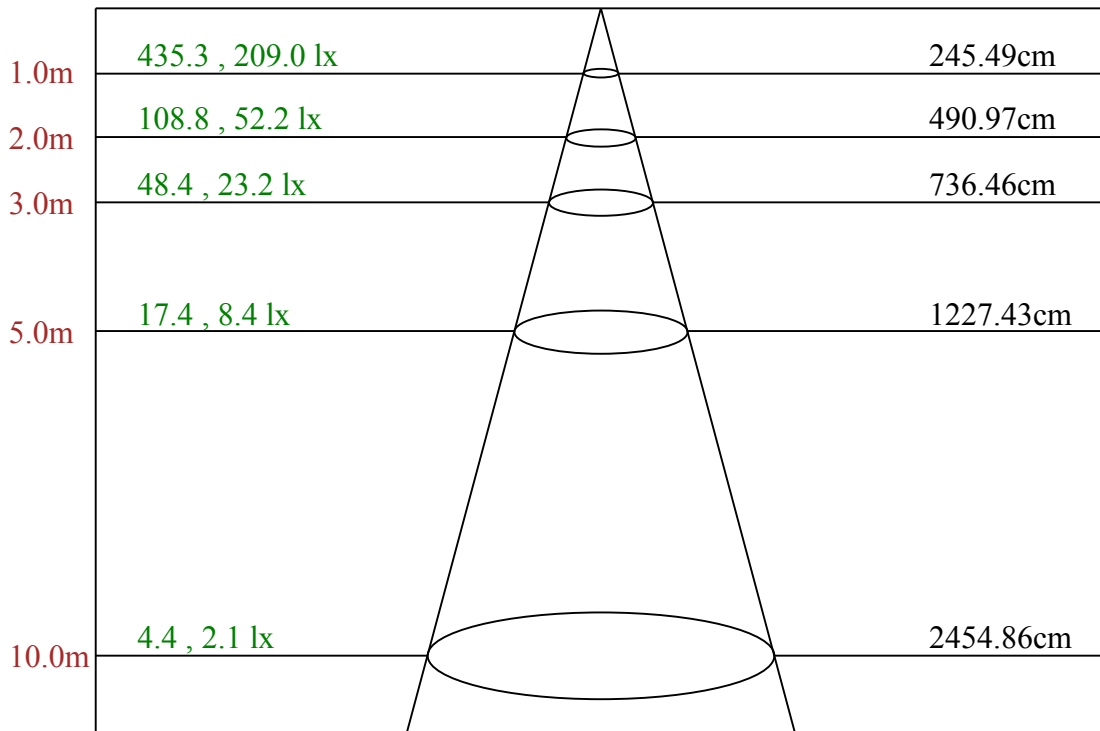
0-10	14.78
10-20	46.80
20-30	80.05
30-40	101.02
40-50	89.52
50-60	45.96
60-70	13.80
70-80	5.55
80-90	1.68
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



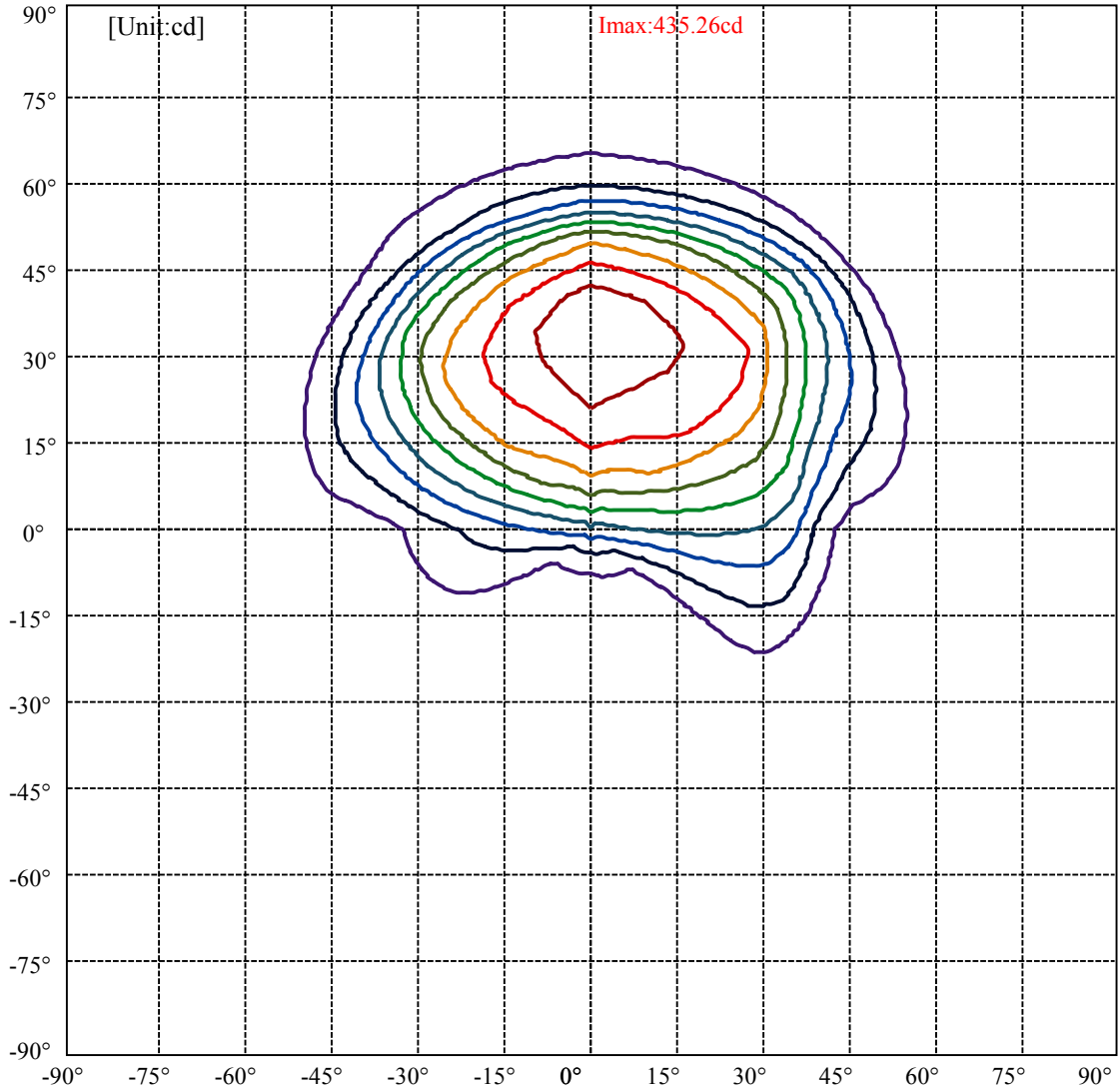
C90(Max): ———
 C0/C180: ———
 C90/C270: ———

Field angle(10%Imax):C0/180Left:58.6 Right:24.9
 :C90/270Left:42.7 Right:29.5

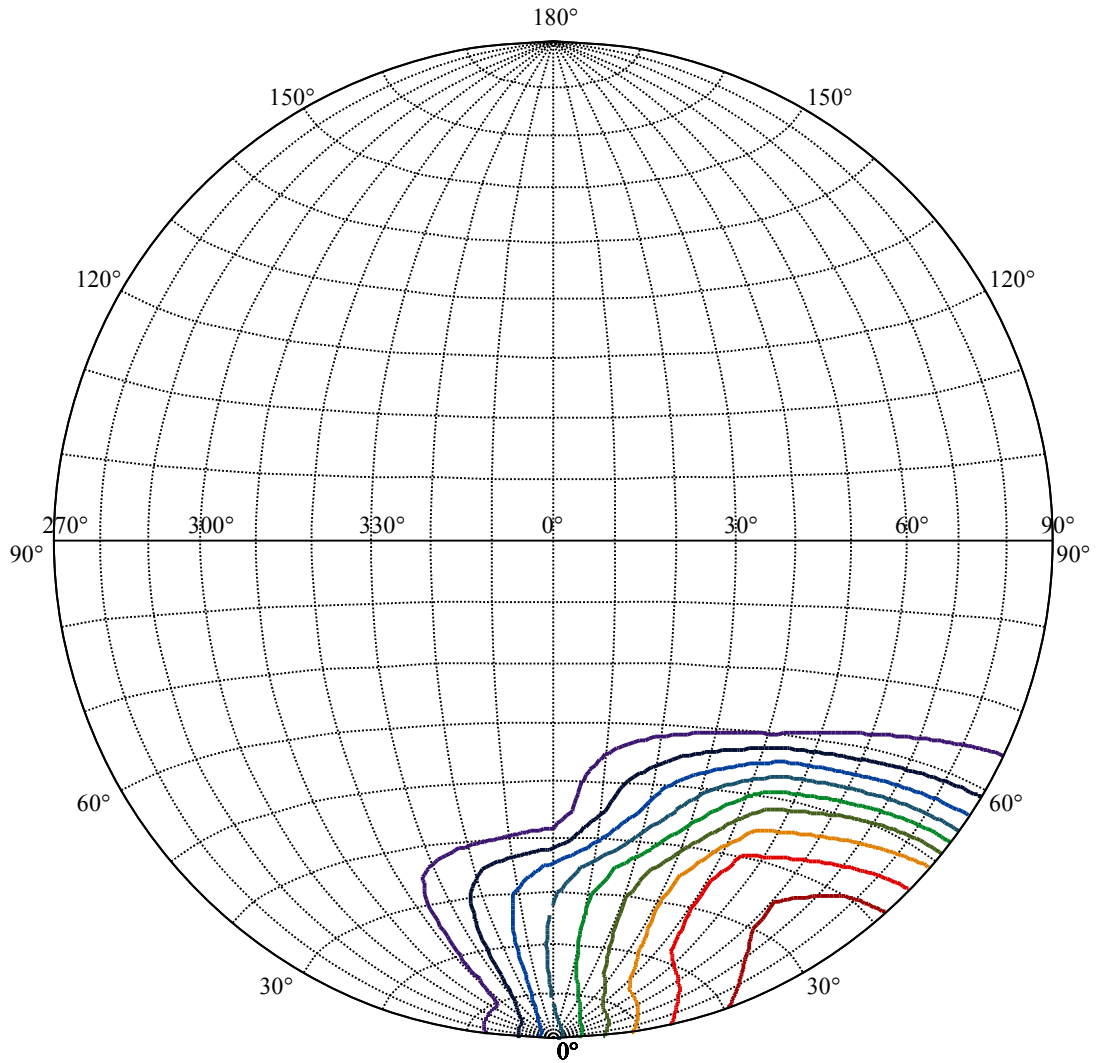
Beam Angle(50%Imax):C0/180Left:41.7 Right:17.9
 :C90/270Left:32.0 Right:17.7



Max , Ave Beam angle of C90 plane 75.33



(10%Imax)	43.5262	—
(20%Imax)	87.0525	—
(30%Imax)	130.579	—
(40%Imax)	174.105	—
(50%Imax)	217.631	—
(60%Imax)	261.158	—
(70%Imax)	304.684	—
(80%Imax)	348.21	—
(90%Imax)	391.736	—



House

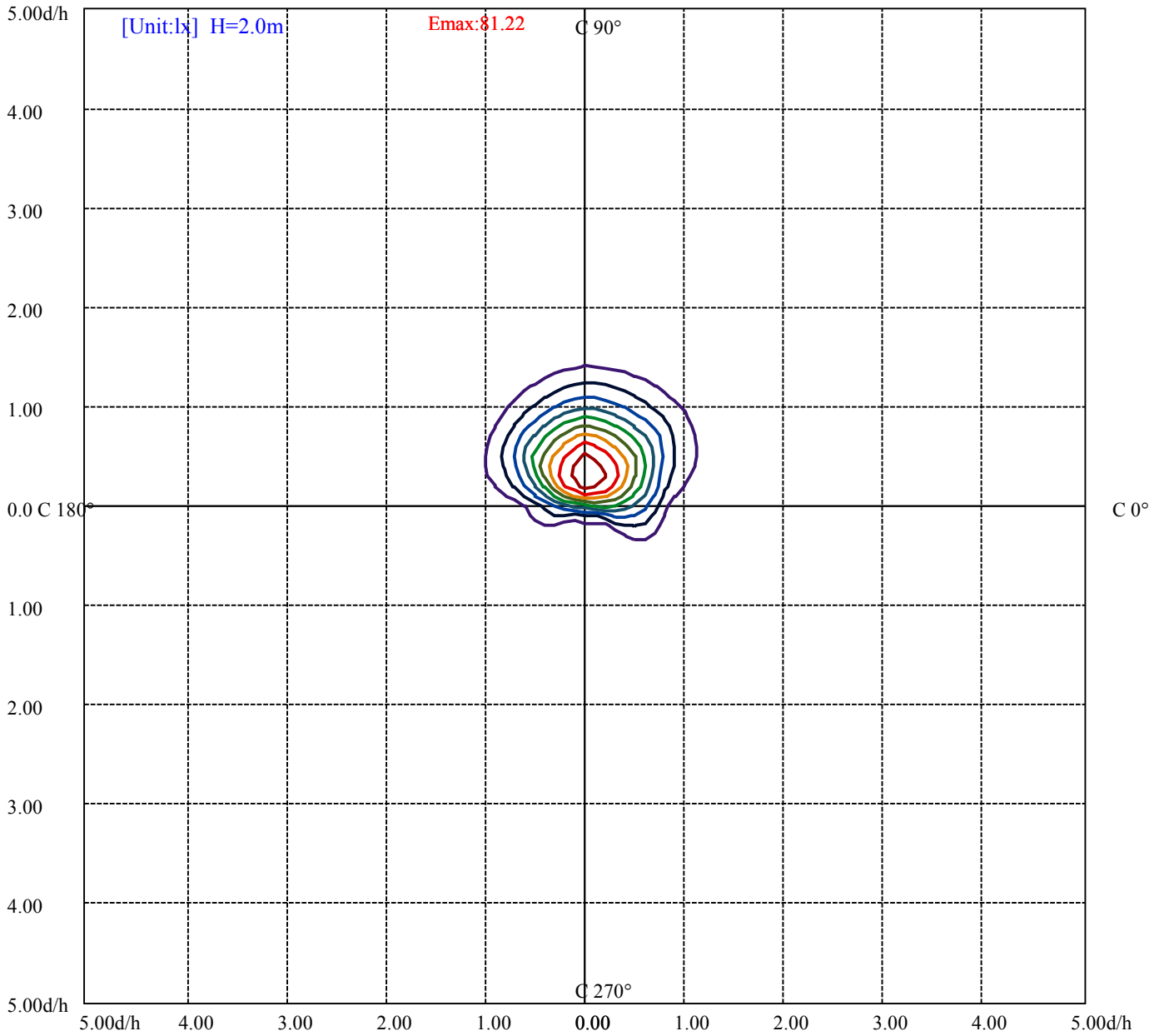
[Unit:cd]

Road

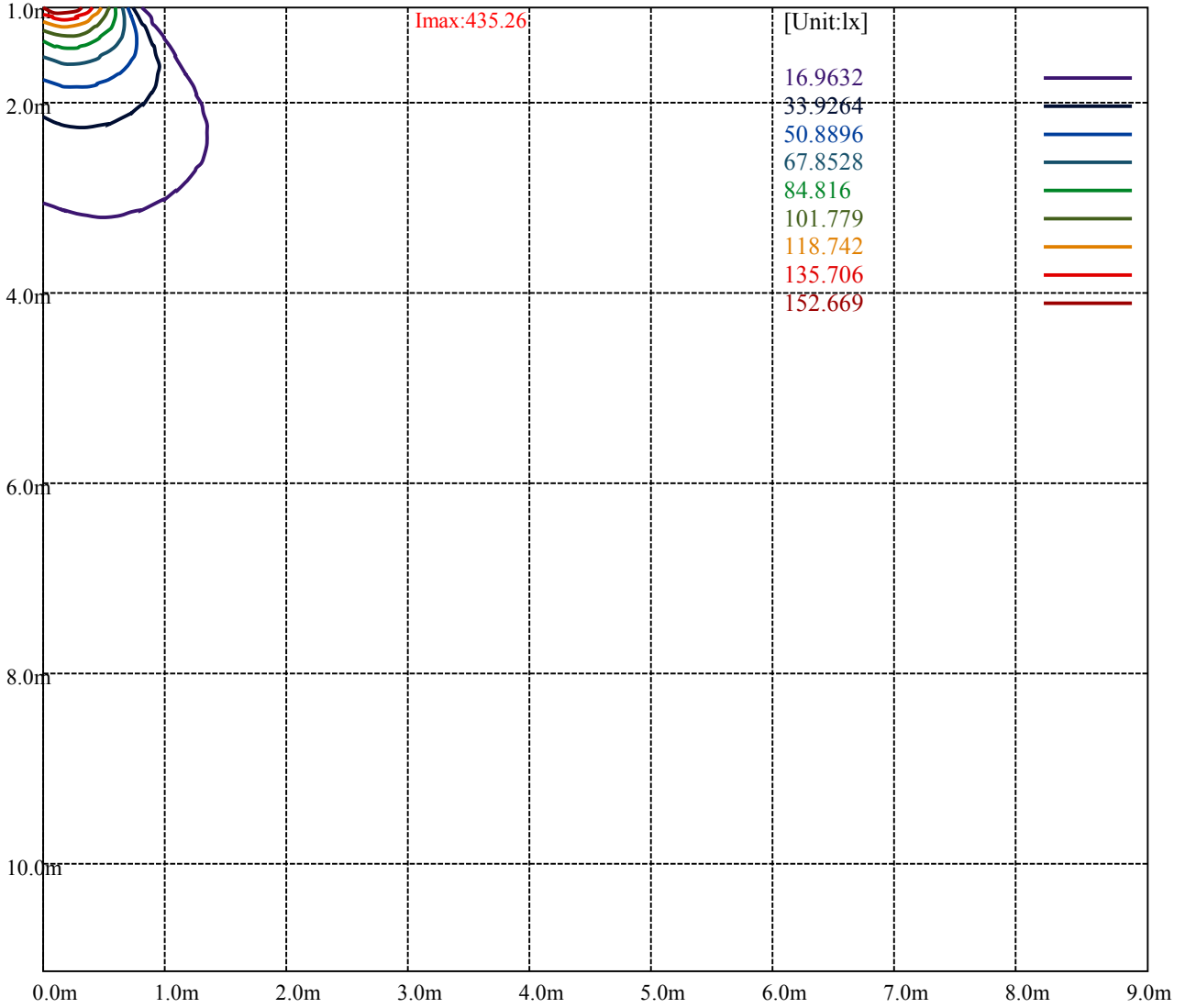
Imax:435.26

- (10%Imax) 43.5262
- (20%Imax) 87.0525
- (30%Imax) 130.579
- (40%Imax) 174.105
- (50%Imax) 217.631
- (60%Imax) 261.158
- (70%Imax) 304.684
- (80%Imax) 348.21
- (90%Imax) 391.736





- (10%Emax) 8.122175
- (20%Emax) 16.24438
- (30%Emax) 24.36655
- (40%Emax) 32.48875
- (50%Emax) 40.611
- (60%Emax) 48.733
- (70%Emax) 56.85525
- (80%Emax) 64.9775
- (90%Emax) 73.09975



Luminance Table

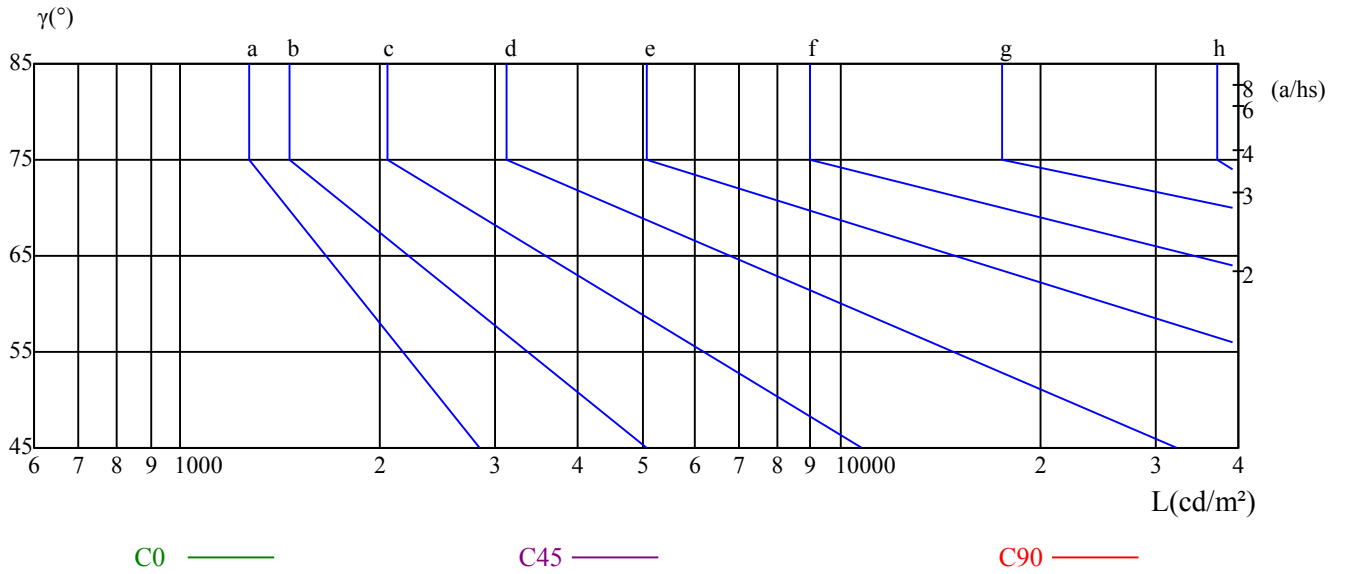
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

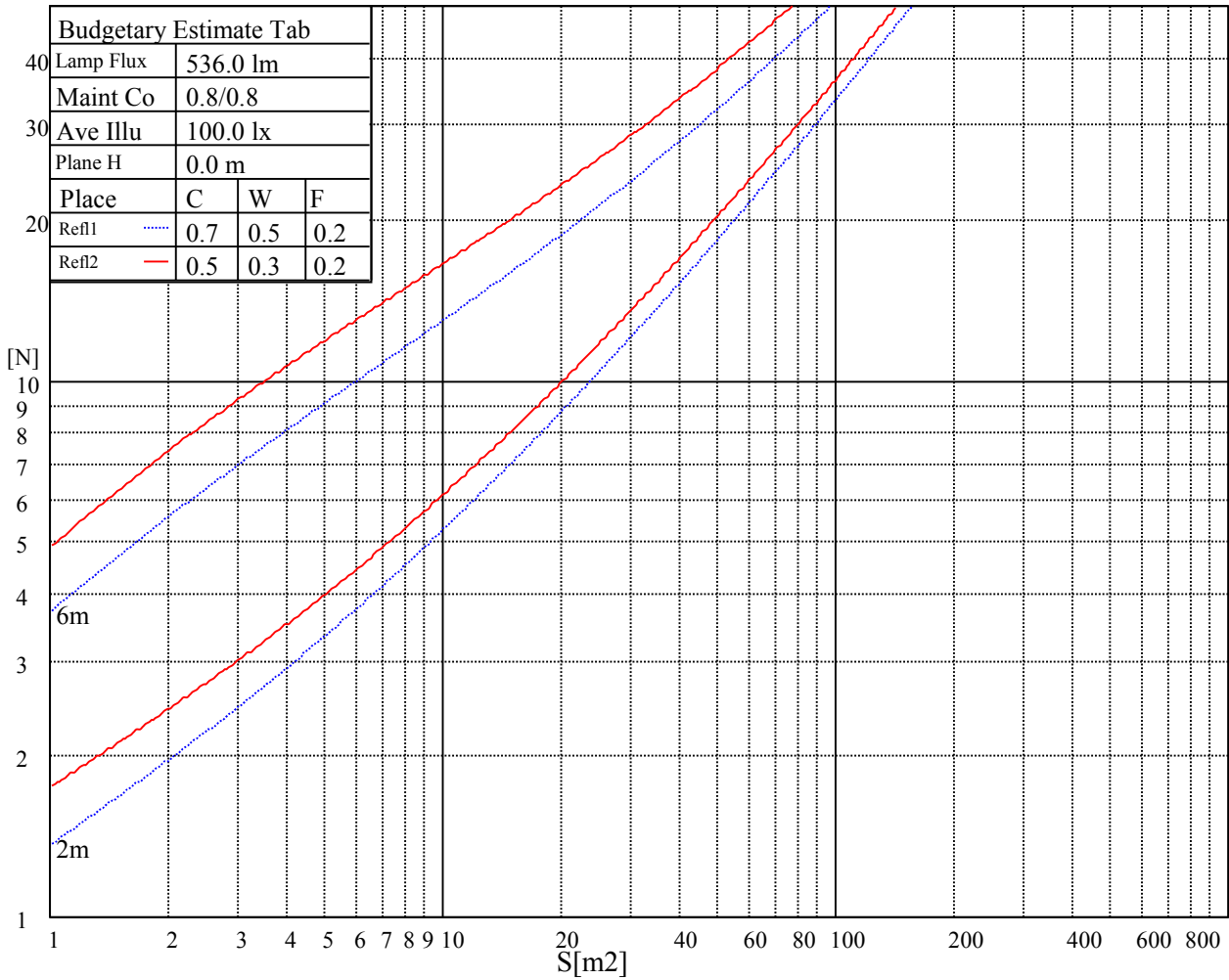
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

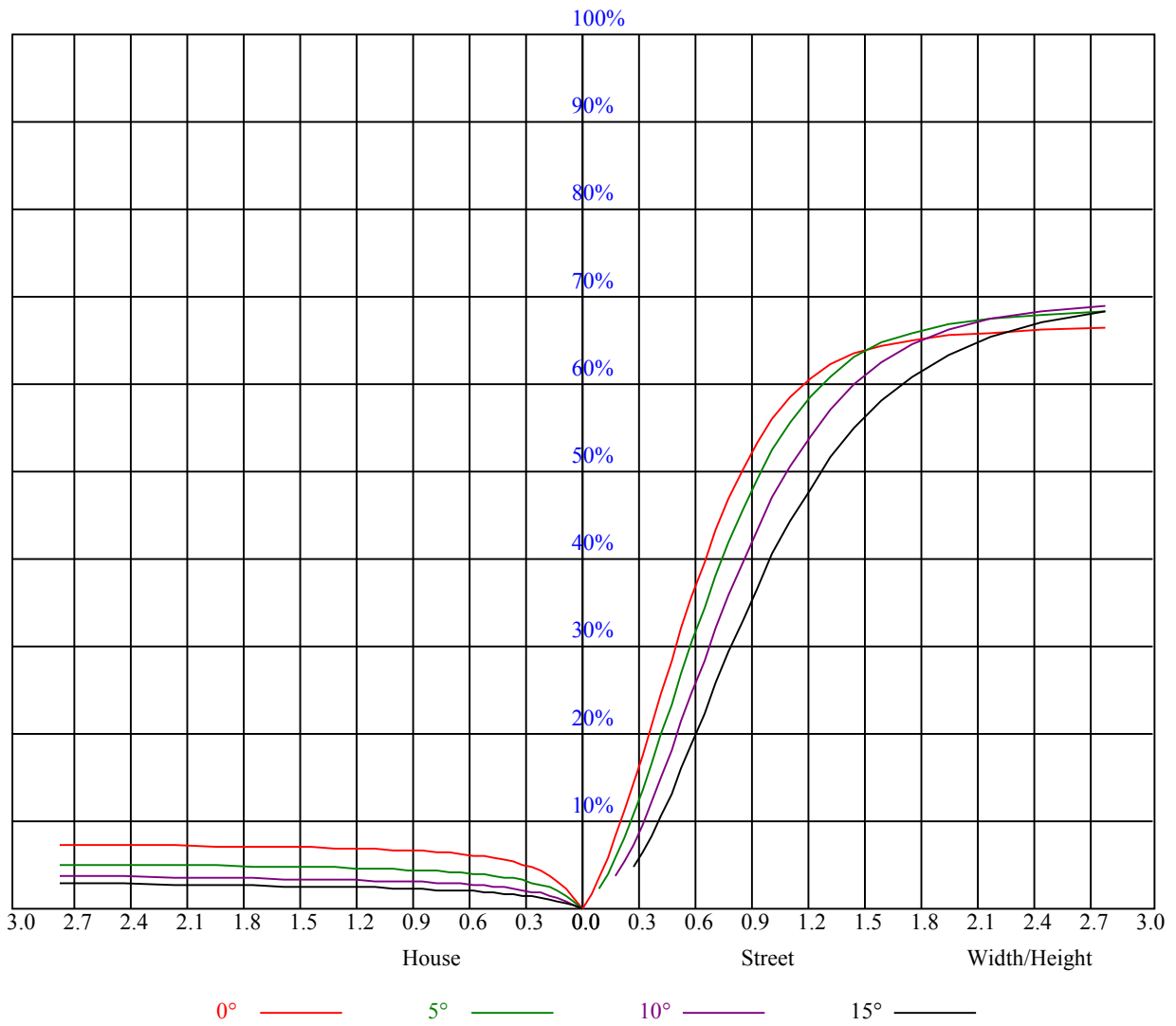
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





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	0.89	0.89	0.89	0.87	0.87	0.87	0.83	0.83	0.83	0.79	0.79	0.79	0.76	0.76	0.76	0.75
1	0.80	0.78	0.75	0.79	0.76	0.74	0.75	0.74	0.72	0.73	0.71	0.70	0.70	0.69	0.68	0.66
2	0.72	0.68	0.64	0.71	0.67	0.64	0.68	0.65	0.62	0.66	0.63	0.61	0.64	0.61	0.60	0.58
3	0.65	0.60	0.56	0.64	0.59	0.55	0.61	0.57	0.54	0.60	0.56	0.53	0.58	0.55	0.52	0.51
4	0.58	0.53	0.48	0.57	0.52	0.48	0.56	0.51	0.47	0.54	0.50	0.47	0.52	0.49	0.46	0.45
5	0.53	0.47	0.43	0.52	0.46	0.42	0.50	0.46	0.42	0.49	0.45	0.41	0.48	0.44	0.41	0.40
6	0.48	0.42	0.38	0.47	0.42	0.38	0.46	0.41	0.37	0.45	0.40	0.37	0.44	0.40	0.37	0.35
7	0.44	0.38	0.34	0.43	0.37	0.33	0.42	0.37	0.33	0.41	0.36	0.33	0.40	0.36	0.33	0.31
8	0.40	0.34	0.30	0.39	0.34	0.30	0.39	0.33	0.30	0.38	0.33	0.30	0.37	0.33	0.30	0.28
9	0.37	0.31	0.27	0.36	0.31	0.27	0.35	0.31	0.27	0.35	0.30	0.27	0.34	0.30	0.27	0.26
10	0.34	0.28	0.25	0.34	0.28	0.25	0.33	0.28	0.25	0.32	0.28	0.24	0.32	0.27	0.24	0.23



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	154.74	168.36	178.76	183.15	183.94	179.27	169.31	136.91	58.39
45.0	150.08	224.21	275.57	318.49	341.72	357.19	366.81	367.54	349.82
90.0	165.88	251.27	315.23	360.00	388.63	413.10	430.88	435.26	411.19
135.0	153.62	213.41	256.61	288.17	308.36	321.13	326.59	318.26	287.33
180.0	155.59	143.21	131.34	116.21	99.28	77.23	54.28	29.19	14.34
225.0	150.08	74.14	26.38	19.07	15.08	14.46	12.21	9.17	8.10
270.0	165.88	67.22	23.40	17.21	15.58	13.11	9.73	8.61	6.02
315.0	153.62	88.31	38.59	21.38	17.38	14.23	13.73	11.53	8.94
360.0	154.74	168.36	178.76	183.15	183.94	179.27	169.31	136.91	58.39
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	17.33	14.51	11.81	9.34	7.54	6.30	5.12	3.99	3.04
45.0	300.32	238.16	149.23	46.41	23.68	12.49	6.64	3.38	1.69
90.0	355.61	292.56	154.63	70.65	40.28	18.00	7.26	3.32	1.69
135.0	231.86	132.92	50.06	33.47	17.78	9.90	5.57	3.15	1.97
180.0	12.32	11.08	9.23	7.54	6.13	5.12	3.99	3.38	2.87
225.0	5.68	4.50	3.66	3.21	2.81	2.53	2.31	3.15	2.36
270.0	4.78	4.05	3.66	3.26	2.87	2.64	5.01	7.31	2.70
315.0	7.43	5.74	4.67	3.99	3.54	3.15	2.93	2.93	2.64
360.0	17.33	14.51	11.81	9.34	7.54	6.30	5.12	3.99	3.04
C/γ(°)	90.0								
0.0	2.08								
45.0	1.01								
90.0	1.07								
135.0	1.35								
180.0	2.03								
225.0	1.07								
270.0	1.18								
315.0	1.35								
360.0	2.08								