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## NATA

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LumCAT: 1535-E	
Luminaire: 92.70.051.00	
Report No: NATA0100	Voltage(V): 35.5000
Test No: GC2019010306	Current(A): 0.2600
LampCAT: BRIDGELUX V8E G7	Power (W): 9.2300
Lamp flux(lm): 1392.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 25	Width(mm): 25
Phm Type: C	Height(mm): 0

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## Photometric Results

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Lumens(lm): 1213.07  
Efficiency(%): 87.15%  
Lumens(lm)/Power(W): 132.68  
Central intensity(cd): 2130.188  
Maximum intensity(cd): 2130.188  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=38.9  
                                  [C90/270]Total=38.9  
Field angle(10%Imax): [C0/180]Total=78.8  
                                  [C90/270]Total=78.8  
Maximum s/h(1/2): C0\_180=0.62 C90\_270=0.62  
Maximum s/h(1/4): C0\_180=0.66 C90\_270=0.66  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 87.98%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.293%

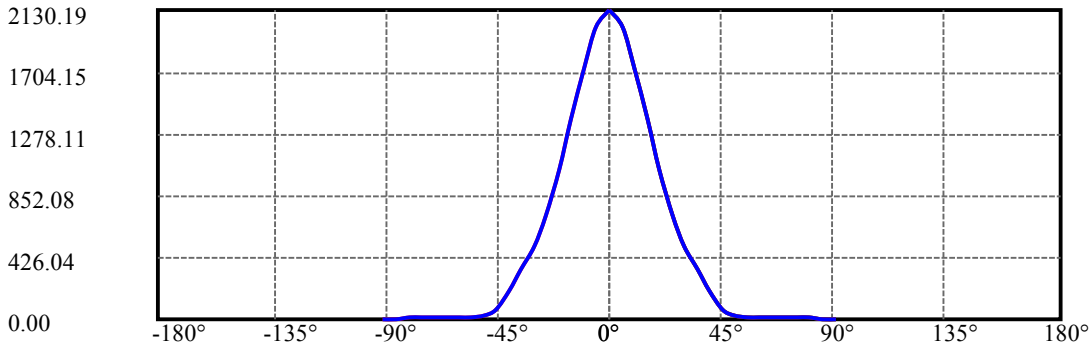
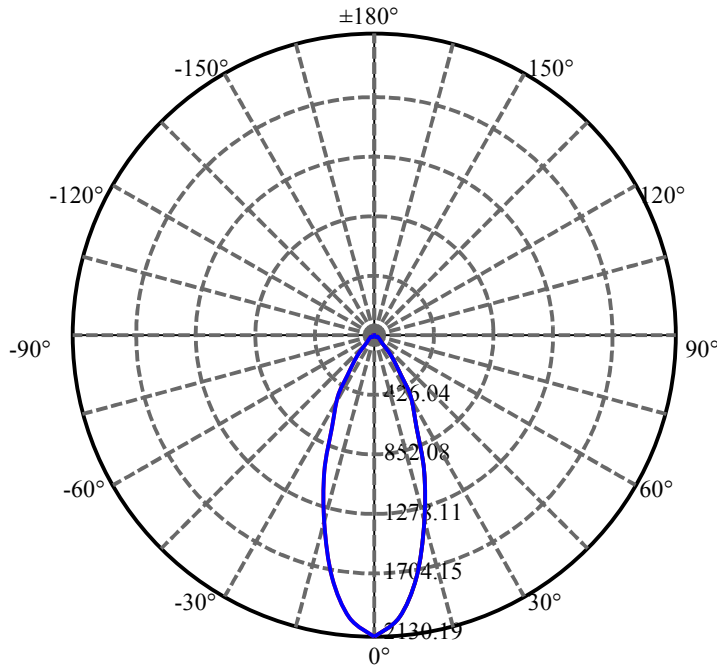
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	2130.188	12.739	12.739	.915%	1.050%
5.0	2008.688	95.962	108.701	6.894%	8.961%
10.0	1732.992	164.951	273.652	11.850%	22.559%
15.0	1381.148	195.941	469.593	14.076%	38.711%
20.0	1025.536	192.261	661.855	13.812%	54.560%
25.0	711.534	164.829	826.684	11.841%	68.148%
30.0	506.679	138.865	965.549	9.976%	79.596%
35.0	340.467	107.042	1072.591	7.690%	88.420%
40.0	195.757	68.972	1141.563	4.955%	94.106%
45.0	69.441	26.915	1168.478	1.934%	96.324%
50.0	27.577	11.579	1180.057	.832%	97.279%
55.0	13.605	6.109	1186.166	.439%	97.782%
60.0	11.243	5.337	1191.503	.383%	98.222%
65.0	9.471	4.705	1196.208	.338%	98.610%
70.0	8.276	4.263	1200.471	.306%	98.962%
75.0	7.566	4.006	1204.477	.288%	99.292%
80.0	6.996	3.777	1208.253	.271%	99.603%
85.0	6.300	3.440	1211.693	.247%	99.887%
90.0	5.013	1.374	1213.067	.099%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	965.55	69.36%	79.60%
0-40	1141.56	82.01%	94.11%
0-60	1191.50	85.60%	98.22%
0-90	1211.69	87.05%	99.89%
0-120	1211.69	87.05%	99.89%
0-180	1213.07	87.15%	100.00%
60-90	25.53	1.83%	2.10%
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%
0-30.23	970.45	69.72%	80.00%

ZONAL LUMEN SUMMARY

0-10	273.65
10-20	388.20
20-30	303.69
30-40	176.01
40-50	38.49
50-60	11.45
60-70	8.97
70-80	7.78
80-90	3.44
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: —————

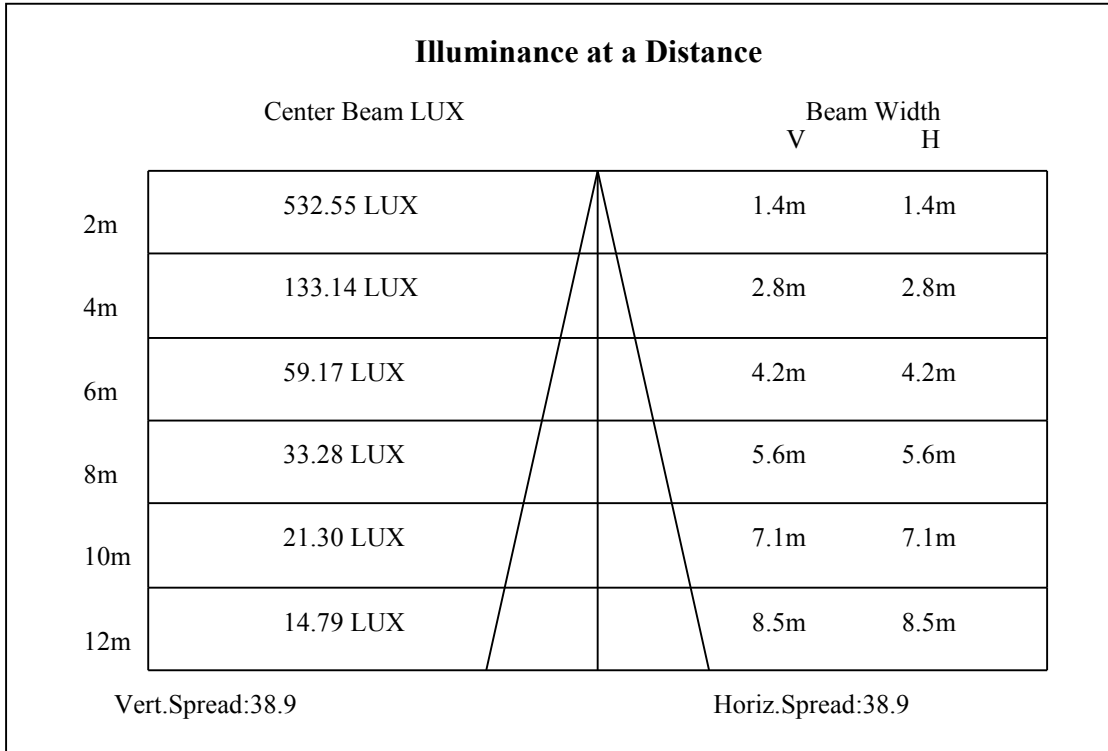
C90/C270: —————

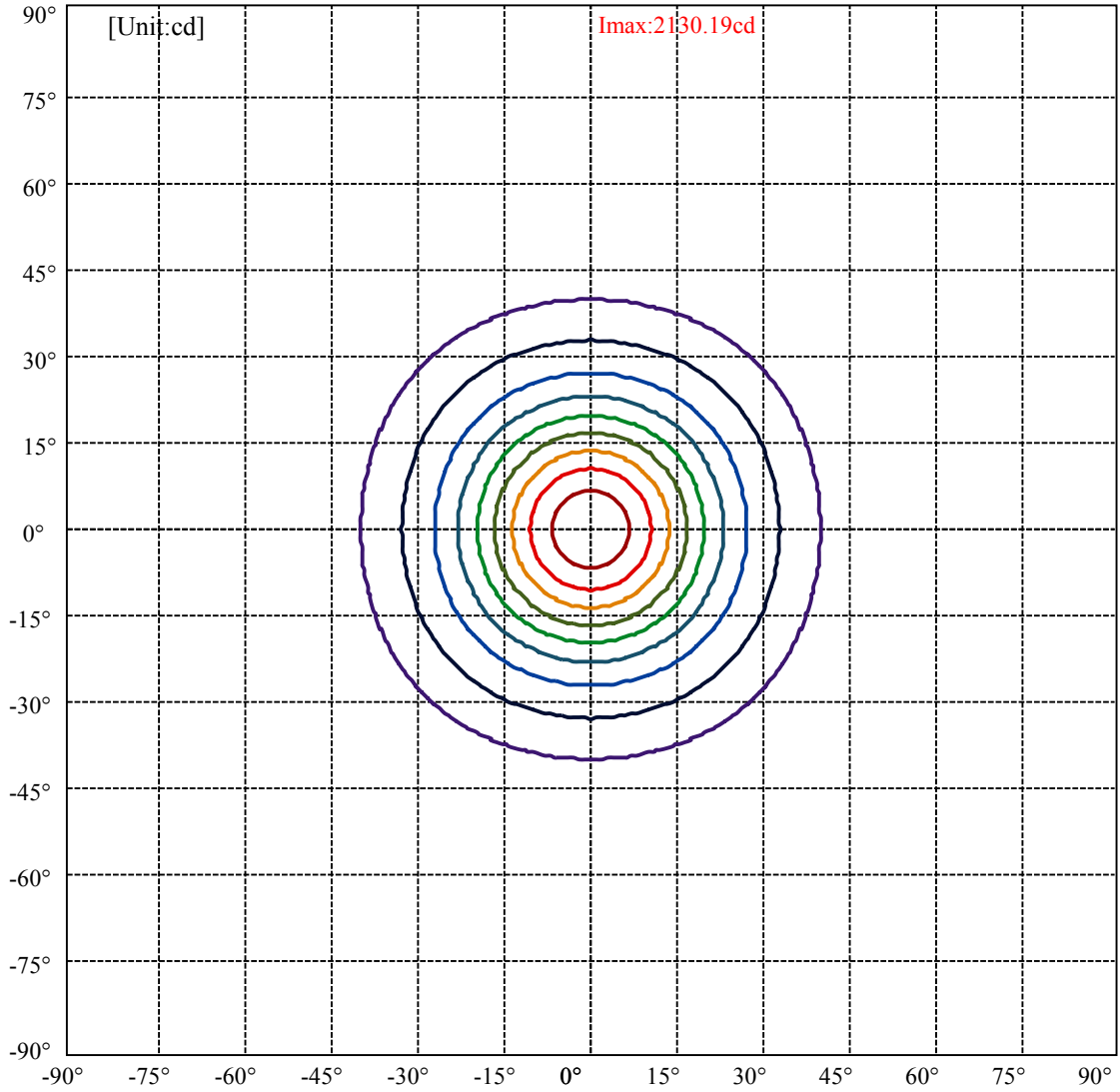
Field angle(10%Imax):C0/180Left:39.4 Right:39.4

:C90/270Left:39.4 Right:39.4

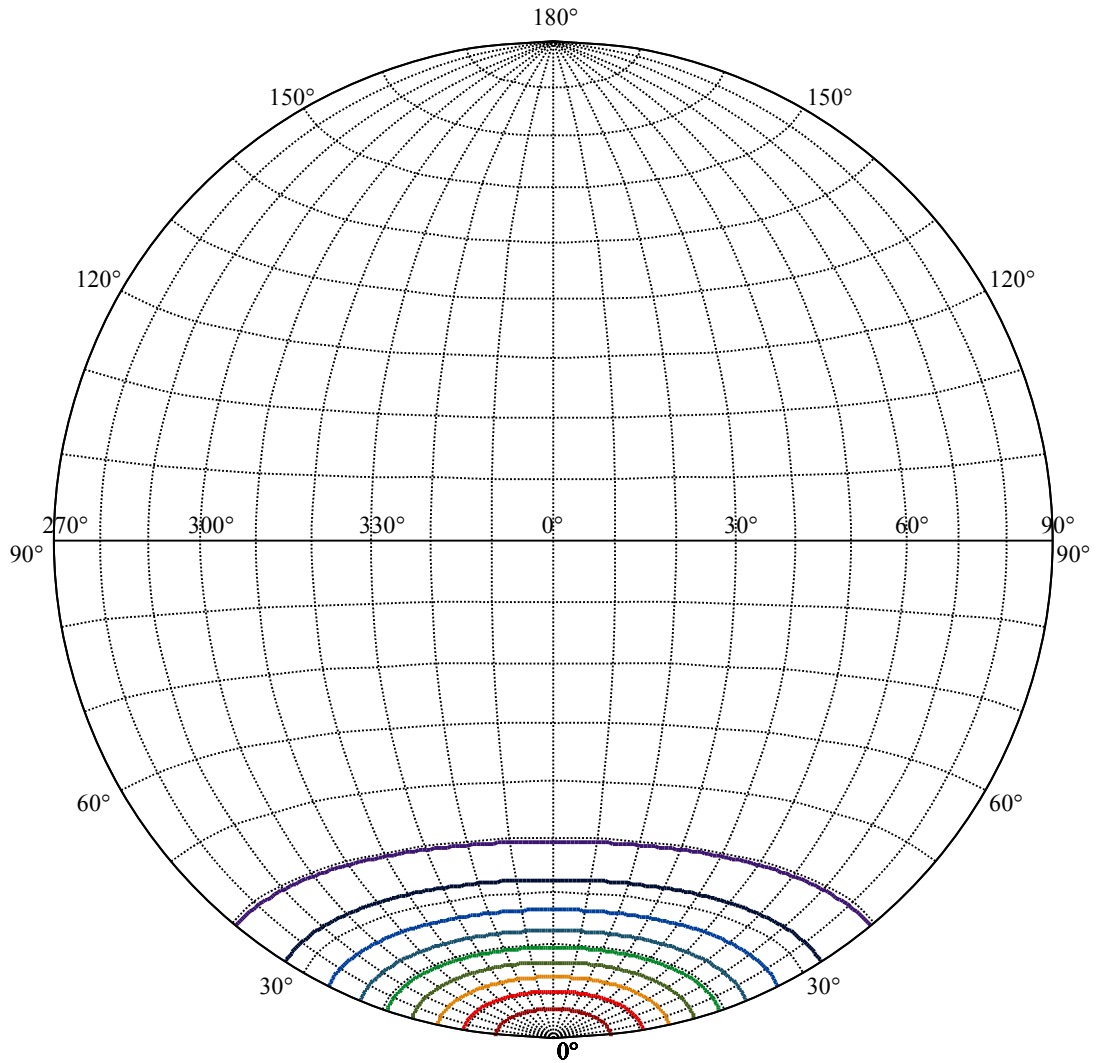
Beam Angle(50%Imax):C0/180Left:19.4 Right:19.4

:C90/270Left:19.4 Right:19.4





(10%Imax) 213.019	—
(20%Imax) 426.038	—
(30%Imax) 639.056	—
(40%Imax) 852.075	—
(50%Imax) 1065.09	—
(60%Imax) 1278.11	—
(70%Imax) 1491.13	—
(80%Imax) 1704.15	—
(90%Imax) 1917.17	—



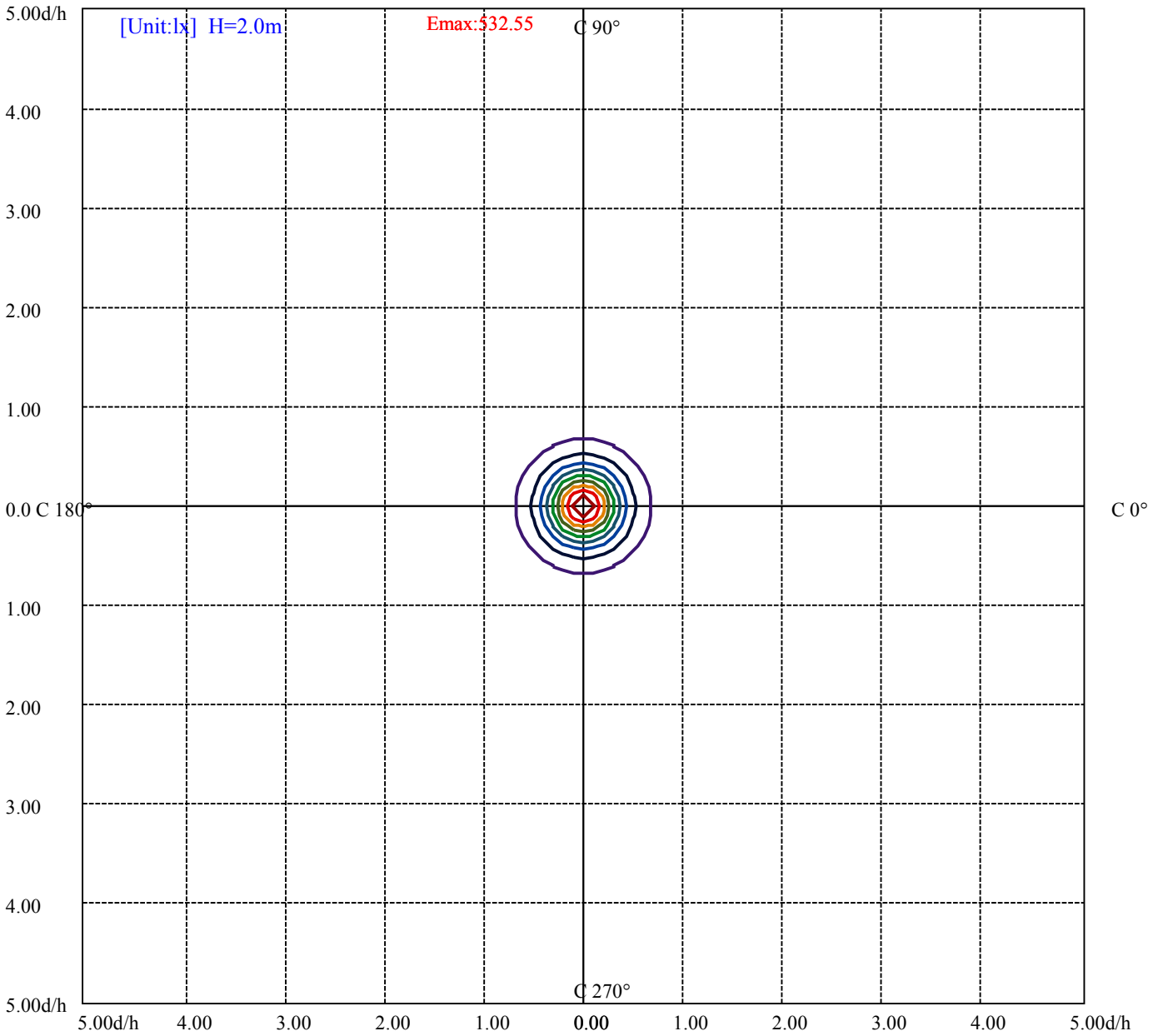
House

[Unit:cd]

Road

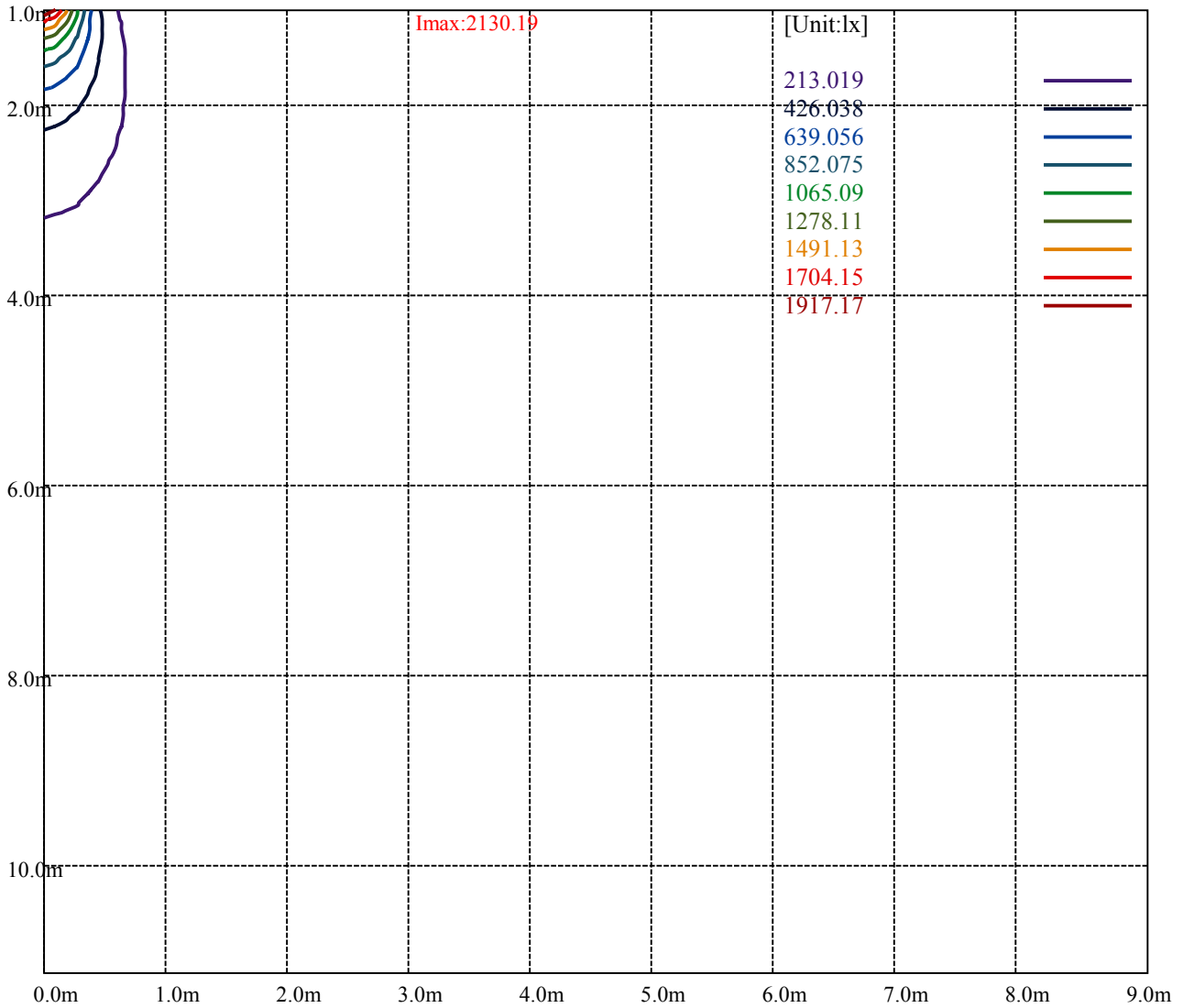
Imax:2130.19

(10%Imax)	213.019	—
(20%Imax)	426.038	—
(30%Imax)	639.056	—
(40%Imax)	852.075	—
(50%Imax)	1065.09	—
(60%Imax)	1278.11	—
(70%Imax)	1491.13	—
(80%Imax)	1704.15	—
(90%Imax)	1917.17	—



(10%Emax) 53.2545	—
(20%Emax) 106.5092	—
(30%Emax) 159.7637	—
(40%Emax) 213.0185	—
(50%Emax) 266.2725	—
(60%Emax) 319.5275	—
(70%Emax) 372.7825	—
(80%Emax) 426.0375	—
(90%Emax) 479.2925	—





Luminance Table

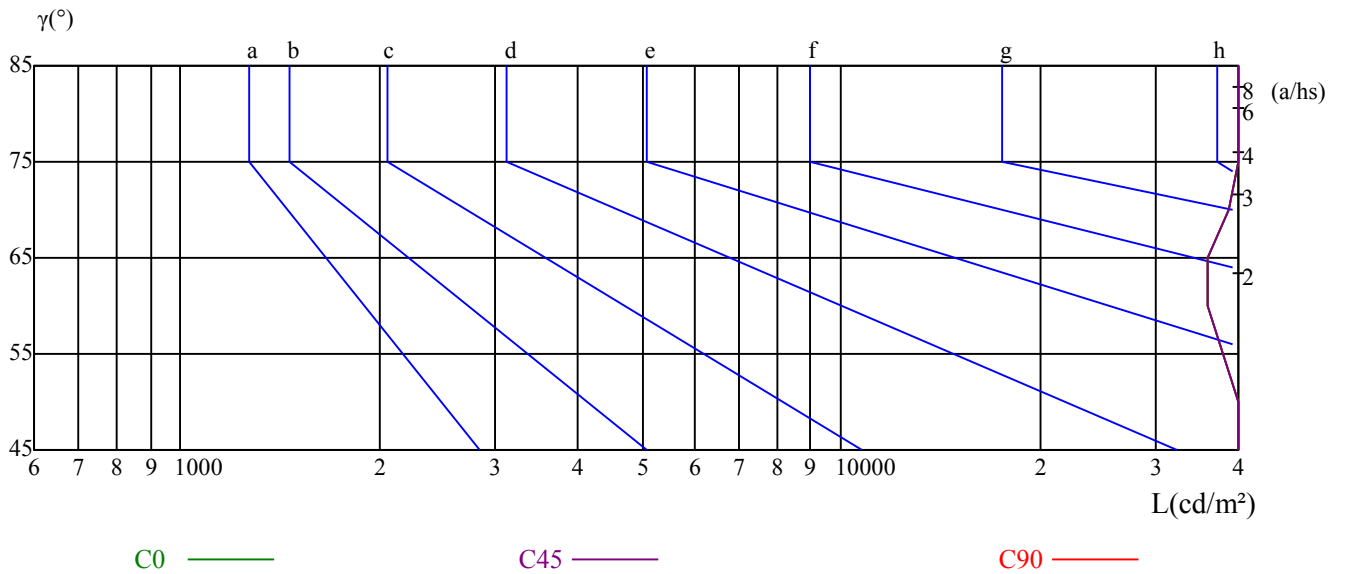
$\gamma$	45	50	55	60	65	70	75	80	85
C0	157126	68642	37953	35978	35857	38715	46770	64462	115655
C45	157126	68642	37953	35978	35857	38715	46770	64462	115655
C90	157126	68642	37953	35978	35857	38715	46770	64462	115655

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
35857	35857	35857	46770	46770	46770	115655	115655	115655

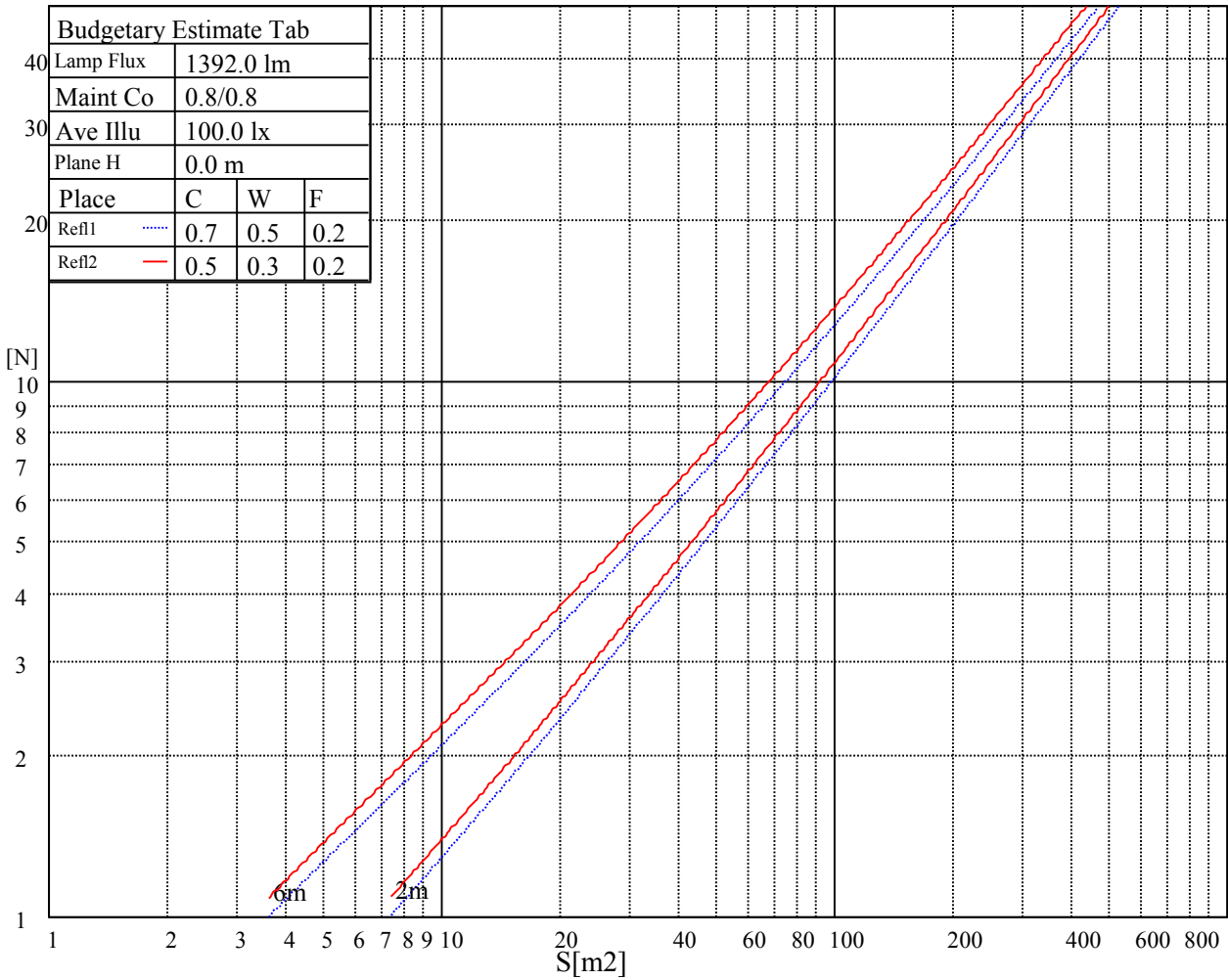
Glare Table

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

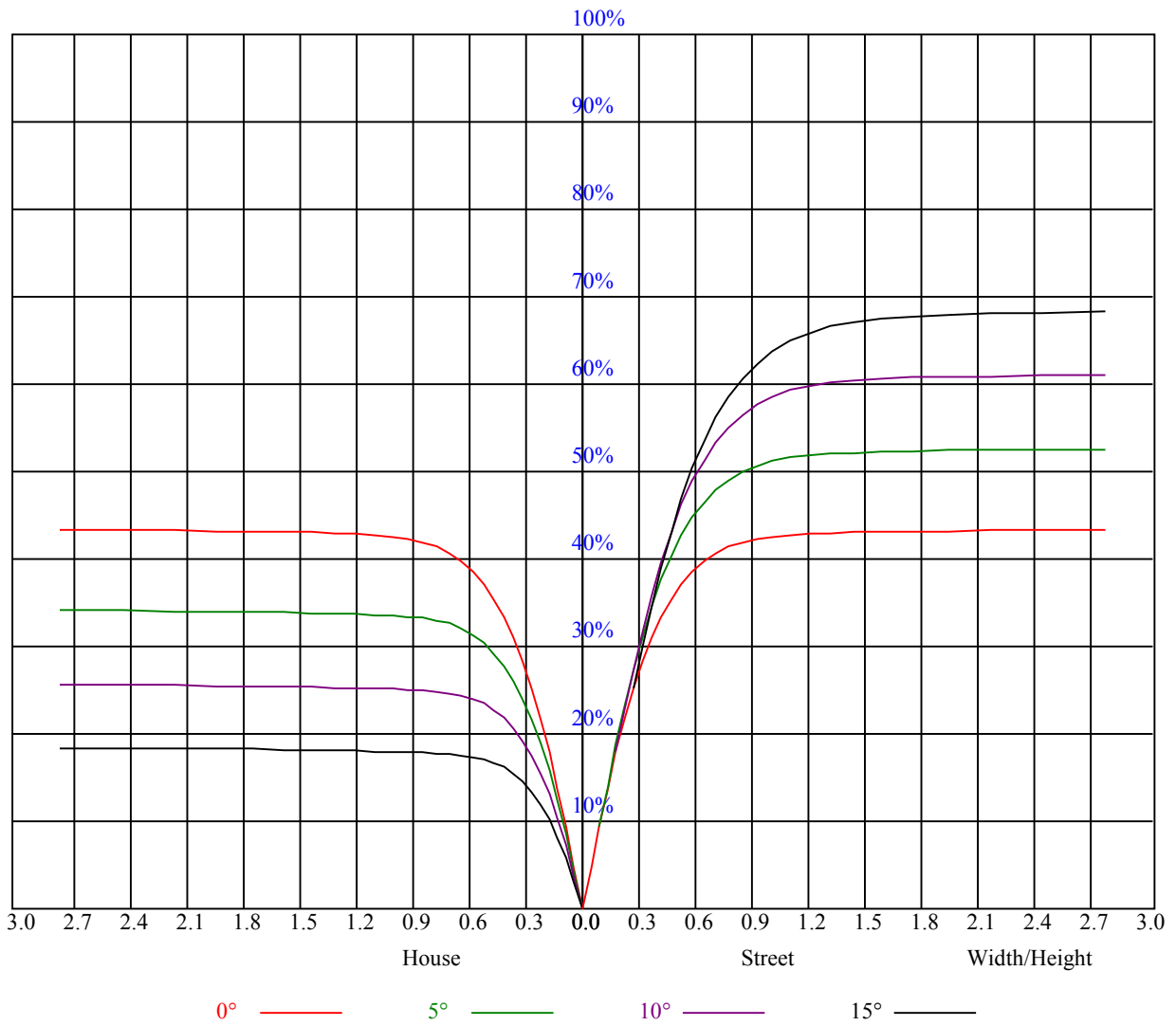
Luminance Limiting Curve



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	15.22	16.20	15.58	16.51	16.83	15.19	16.18	15.56	16.49	16.81
	3H	17.33	18.20	17.71	18.53	18.90	17.29	18.16	17.67	18.49	18.86
	4H	18.50	19.31	18.91	19.66	20.05	18.52	19.33	18.93	19.68	20.07
	6H	19.87	20.61	20.29	20.99	21.38	19.98	20.72	20.40	21.10	21.49
	8H	20.64	21.33	21.07	21.72	22.13	20.79	21.48	21.22	21.87	22.28
	12H	21.91	22.57	22.35	22.96	23.39	22.12	22.78	22.55	23.17	23.60
4H	2H	15.76	16.57	16.17	16.93	17.31	15.75	16.55	16.16	16.91	17.30
	3H	18.18	18.84	18.60	19.25	19.66	18.15	18.81	18.57	19.22	19.63
	4H	19.56	20.15	20.00	20.58	21.03	19.59	20.18	20.03	20.61	21.06
	6H	21.02	21.53	21.49	21.98	22.45	21.13	21.63	21.60	22.08	22.56
	8H	21.94	22.41	22.41	22.86	23.33	22.09	22.56	22.56	23.01	23.48
	12H	23.22	23.63	23.71	24.11	24.59	23.42	23.83	23.91	24.32	24.80
8H	4H	20.09	20.57	20.57	21.02	21.49	20.12	20.59	20.60	21.04	21.52
	6H	21.87	22.25	22.38	22.75	23.24	21.97	22.34	22.48	22.85	23.33
	8H	22.98	23.32	23.52	23.84	24.34	23.12	23.46	23.65	23.98	24.47
	12H	24.50	24.79	25.02	25.28	25.86	24.68	24.97	25.20	25.47	26.05
12H	4H	20.23	20.64	20.73	21.13	21.61	20.25	20.66	20.74	21.15	21.63
	6H	22.41	22.47	22.67	22.94	23.49	22.49	22.55	22.75	23.02	23.57
	8H	23.37	23.66	23.89	24.16	24.74	23.49	23.78	24.02	24.28	24.86
Variation with the observer position at spacings:											
S = 1.0H	3.8/-6.0					3.8/-6.0					
S = 1.5H	5.9/-4.7					5.9/-4.7					
S = 2.0H	7.4/-3.9					7.4/-3.9					
Standard tables:	BK2					BK2					
Uncorrected UGR	8.8					8.8					



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	1.05	1.05	1.05	1.02	1.02	1.02	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.88
1	0.97	0.94	0.92	0.95	0.93	0.91	0.91	0.89	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.81
2	0.91	0.87	0.84	0.89	0.86	0.83	0.86	0.84	0.81	0.84	0.82	0.80	0.81	0.80	0.78	0.77
3	0.85	0.81	0.78	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.77	0.75	0.78	0.76	0.74	0.72
4	0.81	0.76	0.73	0.80	0.75	0.72	0.78	0.74	0.71	0.76	0.73	0.70	0.74	0.72	0.70	0.68
5	0.76	0.72	0.68	0.76	0.71	0.68	0.74	0.70	0.67	0.73	0.69	0.67	0.71	0.68	0.66	0.65
6	0.73	0.68	0.64	0.72	0.67	0.64	0.71	0.67	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.62
7	0.69	0.64	0.61	0.69	0.64	0.61	0.67	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.59
8	0.66	0.61	0.58	0.65	0.61	0.58	0.65	0.60	0.58	0.64	0.60	0.57	0.63	0.60	0.57	0.56
9	0.63	0.58	0.55	0.63	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.54
10	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.55	0.53	0.59	0.55	0.53	0.58	0.55	0.52	0.51



NATA 1535-E

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	2123.44	2061.00	1822.50	1475.44	1122.19	805.50	572.63	411.19	289.69
45.0	2132.44	2049.19	1805.06	1426.50	1072.13	725.63	514.69	348.19	199.74
90.0	2129.06	1977.19	1668.94	1316.25	950.74	650.87	436.84	287.66	151.99
135.0	2135.81	1990.13	1706.06	1368.00	1010.81	699.19	509.63	326.81	171.11
180.0	2123.44	1952.44	1639.69	1296.00	951.92	653.46	476.94	292.61	146.19
225.0	2132.44	1974.94	1689.75	1321.88	974.53	674.38	493.71	316.74	177.58
270.0	2129.06	2045.81	1773.56	1451.81	1077.19	755.44	525.38	375.19	205.88
315.0	2135.81	2018.81	1758.38	1393.31	1044.79	727.82	523.63	365.34	223.88
360.0	2123.44	2061.00	1822.50	1475.44	1122.19	805.50	572.63	411.19	289.69

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	111.77	40.44	14.40	11.64	9.51	7.88	6.81	6.13	5.68
45.0	87.47	32.91	14.74	11.59	9.45	7.99	7.09	6.41	5.85
90.0	50.29	25.31	13.78	11.14	9.39	8.38	7.54	6.86	6.08
135.0	50.63	21.49	13.50	11.64	9.79	8.61	8.10	7.59	6.75
180.0	38.76	18.28	12.54	10.97	9.62	8.66	8.89	8.33	7.09
225.0	48.66	19.97	12.77	11.03	9.56	8.61	7.82	7.59	7.20
270.0	81.90	29.03	13.89	11.14	9.51	8.44	7.59	6.92	6.08
315.0	86.06	33.19	13.22	10.80	8.94	7.65	6.69	6.13	5.68
360.0	111.77	40.44	14.40	11.64	9.51	7.88	6.81	6.13	5.68

C/γ(°)	90.0
0.0	5.06
45.0	5.01
90.0	4.95
135.0	5.12
180.0	5.06
225.0	5.06
270.0	4.89
315.0	4.95
360.0	5.06