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NATA

LumCAT: 3-1647-E
Luminaire: 92.70.134.00
Report No: NATA0100
Test No: GC2019030614
LampCAT: CREE CXA2520
Lamp flux(lm): 2518.0
Number of Lamps: 1
Length(mm): 78
Phm Type: C

Voltage(V): 36.5000
Current(A): 0.8000
Power (W): 29.2000
PF: 0.0000
Ballast type: DC
Width(mm): 78
Height(mm): 0

Photometric Results

Lumens(lm): 2191.56
Efficiency(%): 87.04%
Lumens(lm)/Power(W): 76.79
Central intensity(cd): 8834.766
Maximum intensity(cd): 8834.766
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=26.0
[C90/270]Total=26.0
Field angle(10%Imax): [C0/180]Total=51.0
[C90/270]Total=51.0
Maximum s/h(1/2): C0_180=0.44 C90_270=0.44
Maximum s/h(1/4): C0_180=0.46 C90_270=0.46
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 89.05%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 96.569%



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Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/3/6
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	8834.766	52.834	52.834	2.098%	2.411%
5.0	7939.898	379.315	432.149	15.064%	19.719%
10.0	5807.672	552.792	984.941	21.954%	44.942%
15.0	3477.375	493.330	1478.271	19.592%	67.453%
20.0	1908.773	357.845	1836.116	14.211%	83.781%
25.0	946.955	219.365	2055.481	8.712%	93.791%
30.0	281.848	77.246	2132.726	3.068%	97.315%
35.0	25.404	7.987	2140.713	.317%	97.680%
40.0	16.024	5.646	2146.359	.224%	97.937%
45.0	12.916	5.006	2151.366	.199%	98.166%
50.0	11.306	4.747	2156.113	.189%	98.382%
55.0	10.294	4.622	2160.735	.184%	98.593%
60.0	9.766	4.636	2165.371	.184%	98.805%
65.0	9.436	4.688	2170.059	.186%	99.019%
70.0	9.260	4.770	2174.828	.189%	99.236%
75.0	9.084	4.810	2179.638	.191%	99.456%
80.0	8.916	4.813	2184.451	.191%	99.675%
85.0	8.761	4.784	2189.235	.190%	99.894%
90.0	8.494	2.328	2191.563	.092%	100.000%



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ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2132.73	84.70%	97.32%
0-40	2146.36	85.24%	97.94%
0-60	2165.37	86.00%	98.80%
0-90	2189.23	86.94%	99.89%
0-120	2189.23	86.94%	99.89%
0-180	2191.56	87.04%	100.00%
60-90	28.50	1.13%	1.30%
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%
0-18.84	1753.25	69.63%	80.00%

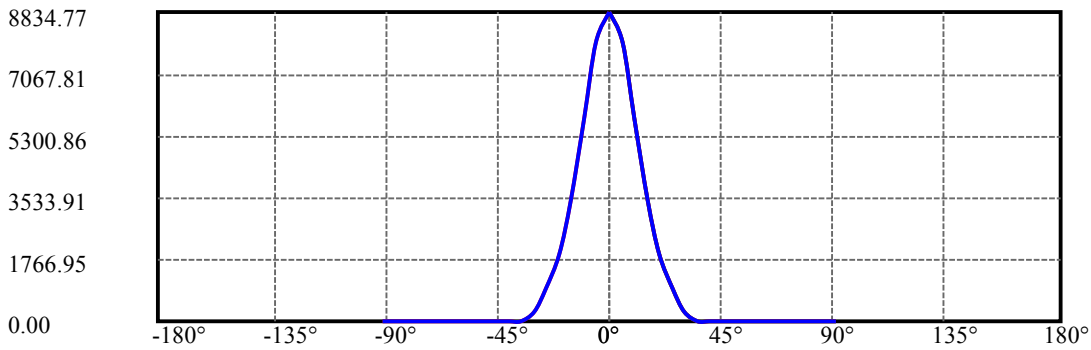
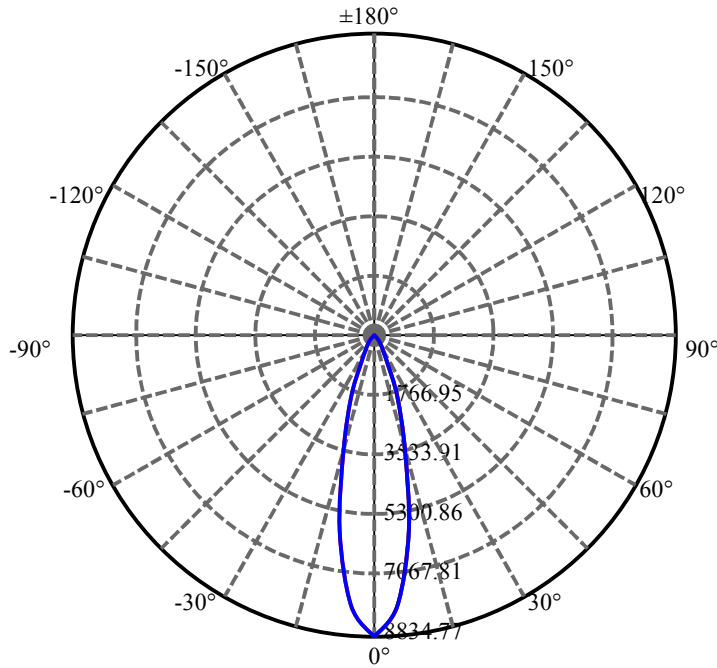
ZONAL LUMEN SUMMARY

0-10	984.94
10-20	851.18
20-30	296.61
30-40	13.63
40-50	9.75
50-60	9.26
60-70	9.46
70-80	9.62
80-90	4.78
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



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

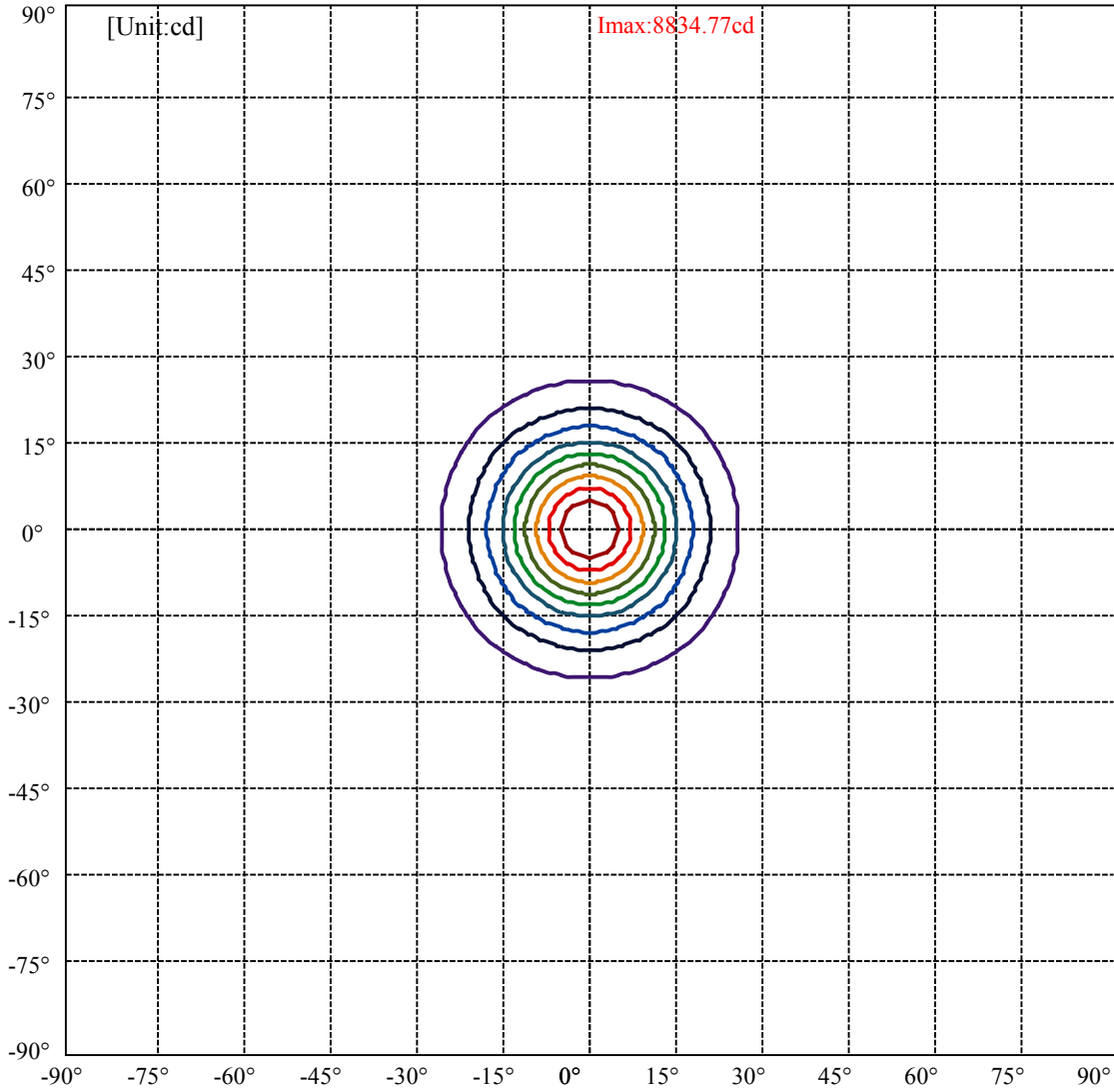
Field angle(10%Imax):C0/180Left:25.5 Right:25.5
:C90/270Left:25.5 Right:25.5

Beam Angle(50%Imax):C0/180Left:13.0 Right:13.0
:C90/270Left:13.0 Right:13.0



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- (10%I_{max}) 883.477
- (20%I_{max}) 1766.95
- (30%I_{max}) 2650.43
- (40%I_{max}) 3533.91
- (50%I_{max}) 4417.38
- (60%I_{max}) 5300.86
- (70%I_{max}) 6184.34
- (80%I_{max}) 7067.81
- (90%I_{max}) 7951.29



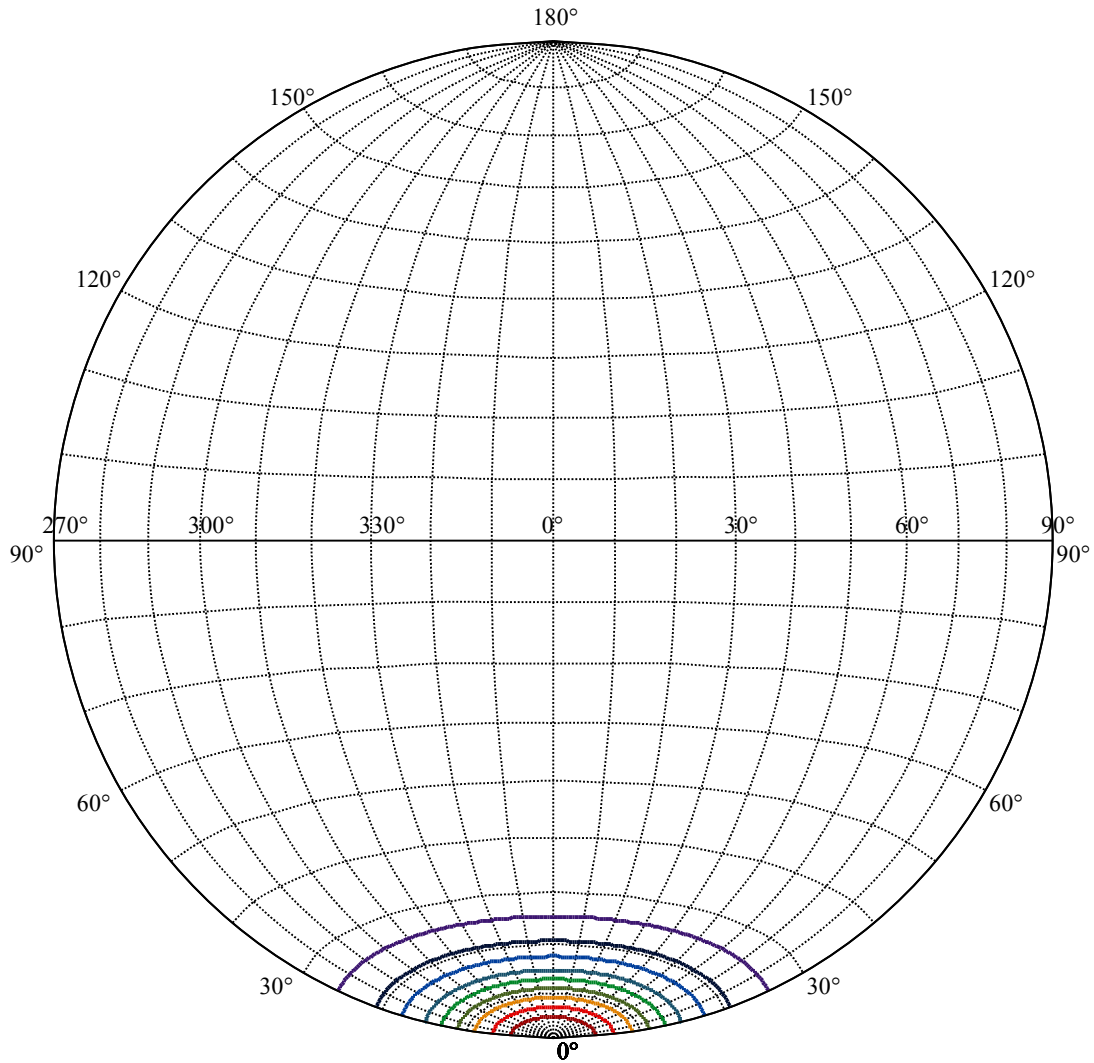
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Equipment: GMS1980
Temperature(°C): 10.0

Date: 2019/3/6
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

PDF Editor



House

[Unit:cd]

Road

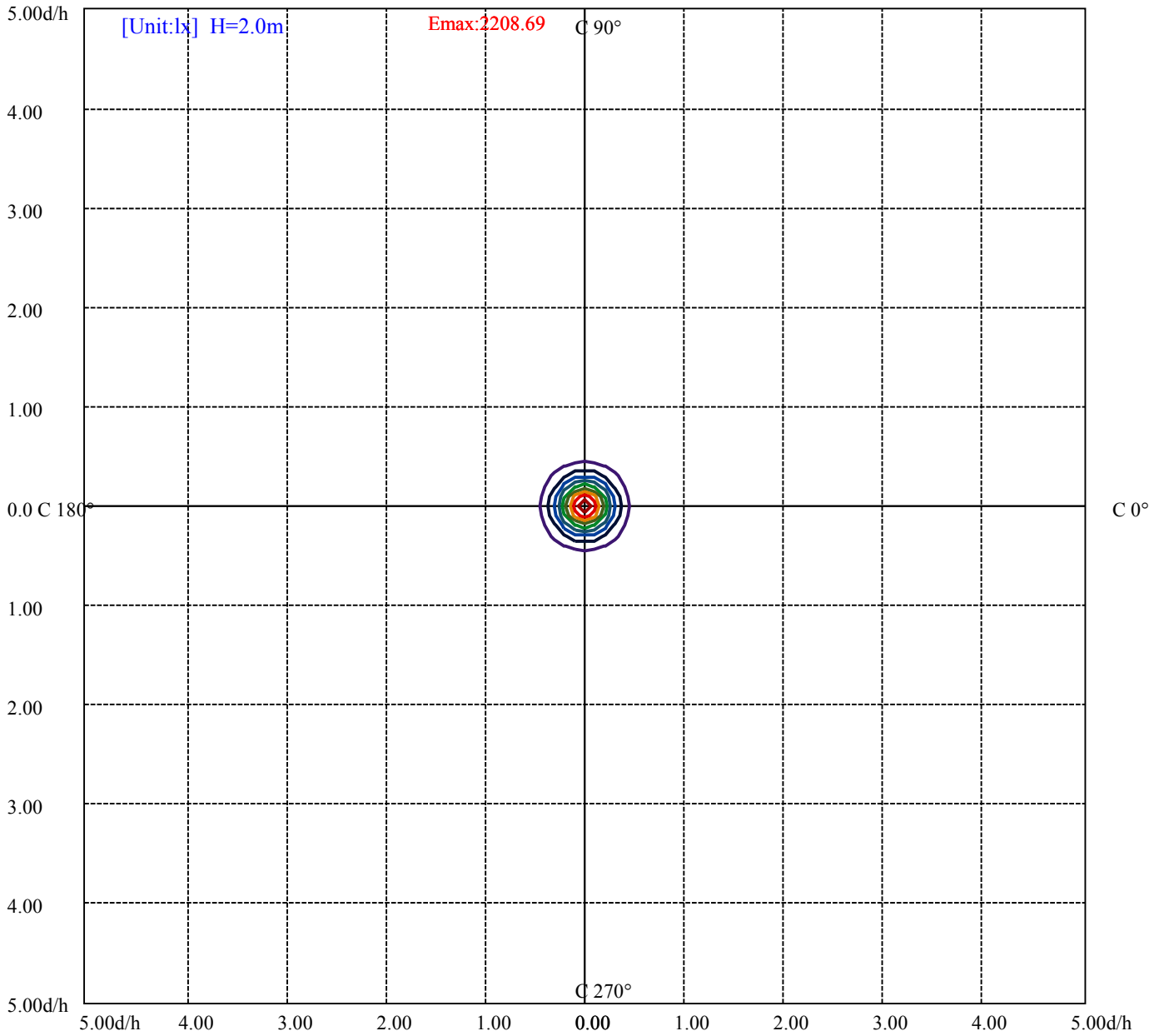
Imax:8834.77

(10%Imax) 883.477	—
(20%Imax) 1766.95	—
(30%Imax) 2650.43	—
(40%Imax) 3533.91	—
(50%Imax) 4417.38	—
(60%Imax) 5300.86	—
(70%Imax) 6184.34	—
(80%Imax) 7067.81	—
(90%Imax) 7951.29	—



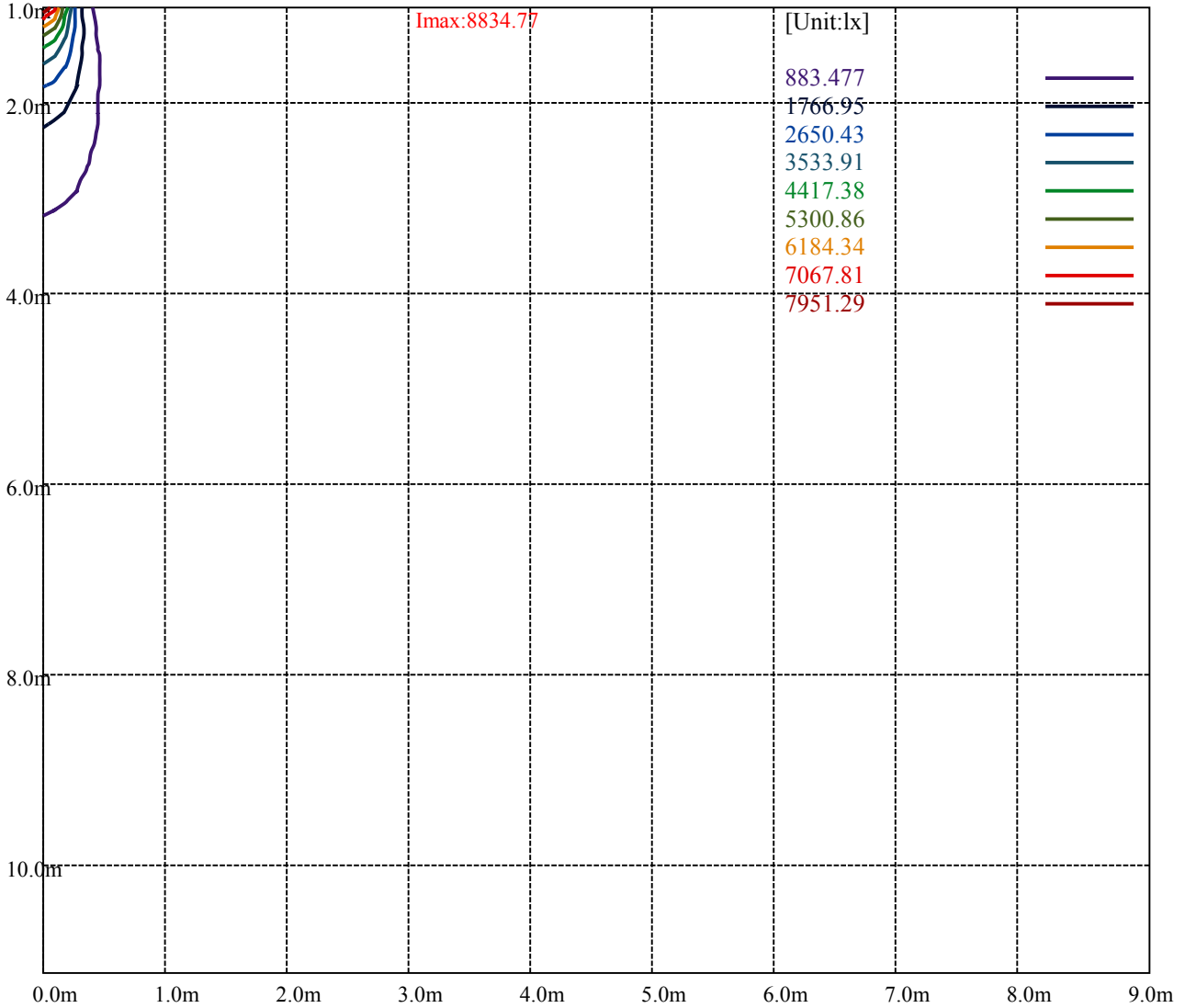
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- (10%Emax) 220.8685
- (20%Emax) 441.7375
- (30%Emax) 662.605
- (40%Emax) 883.475
- (50%Emax) 1104.343
- (60%Emax) 1325.21
- (70%Emax) 1546.08
- (80%Emax) 1766.948
- (90%Emax) 1987.815





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Equipment: GMS1980
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Date: 2019/3/6
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Operator: NT07
Distance(m): 7.50

Luminance Table

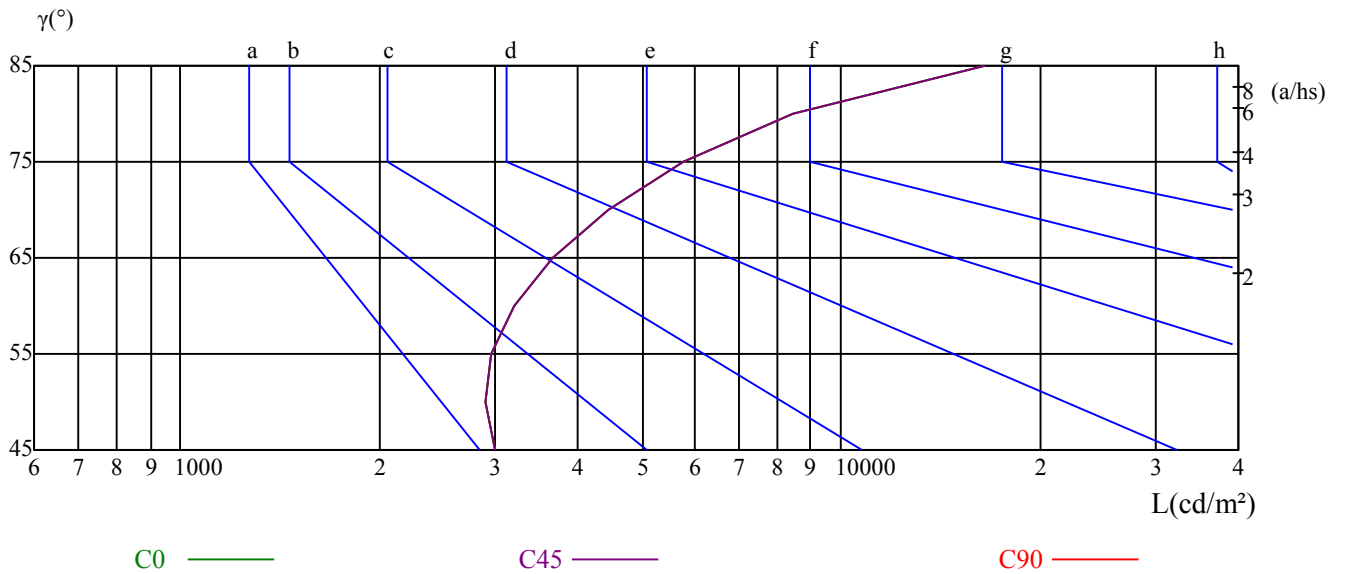
γ	45	50	55	60	65	70	75	80	85
C0	3002	2891	2950	3211	3670	4450	5769	8439	16522
C45	3002	2891	2950	3211	3670	4450	5769	8439	16522
C90	3002	2891	2950	3211	3670	4450	5769	8439	16522

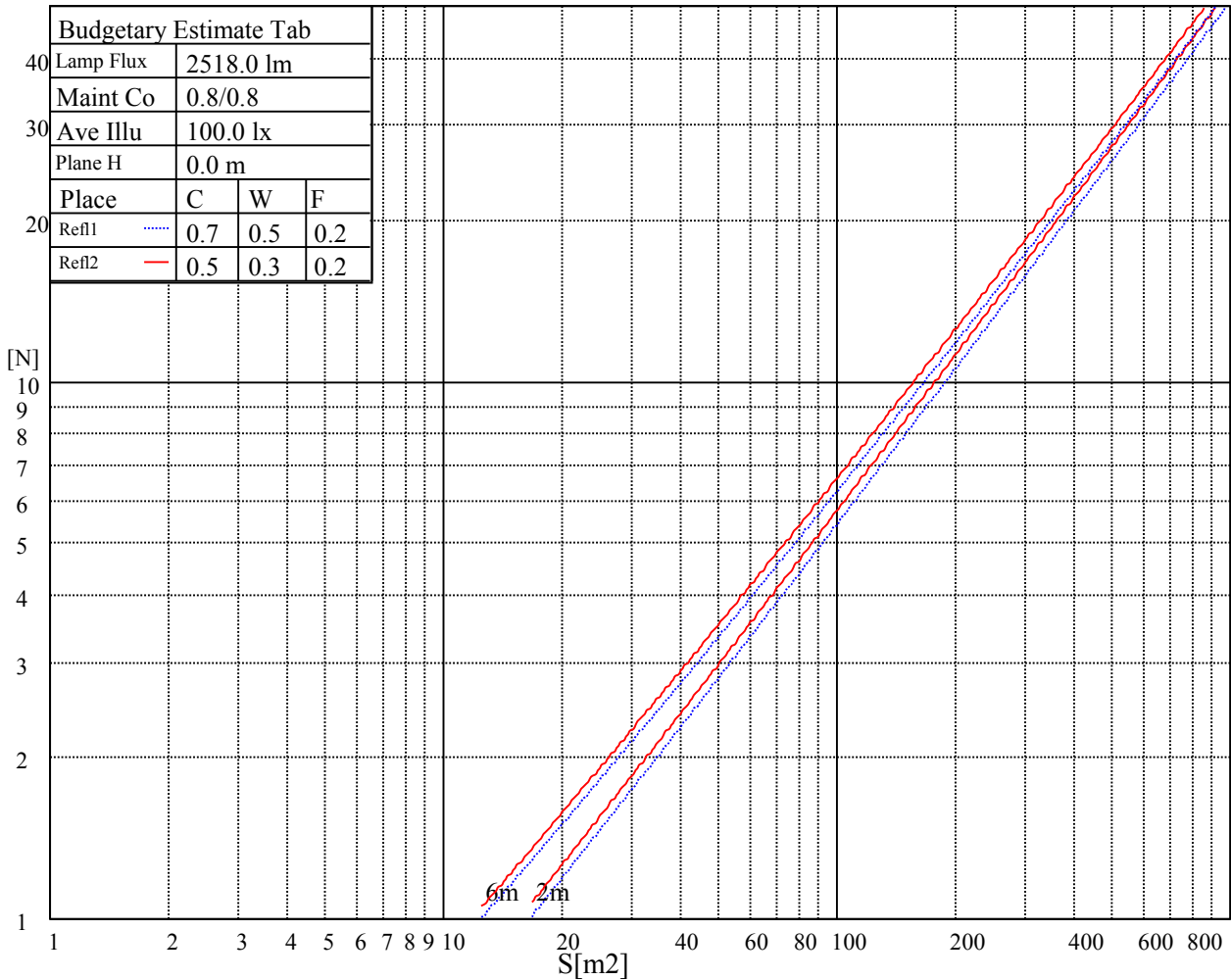
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3670	3670	3670	5769	5769	5769	16522	16522	16522

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





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Equipment: GMS1980
Temperature(°C): 10.0

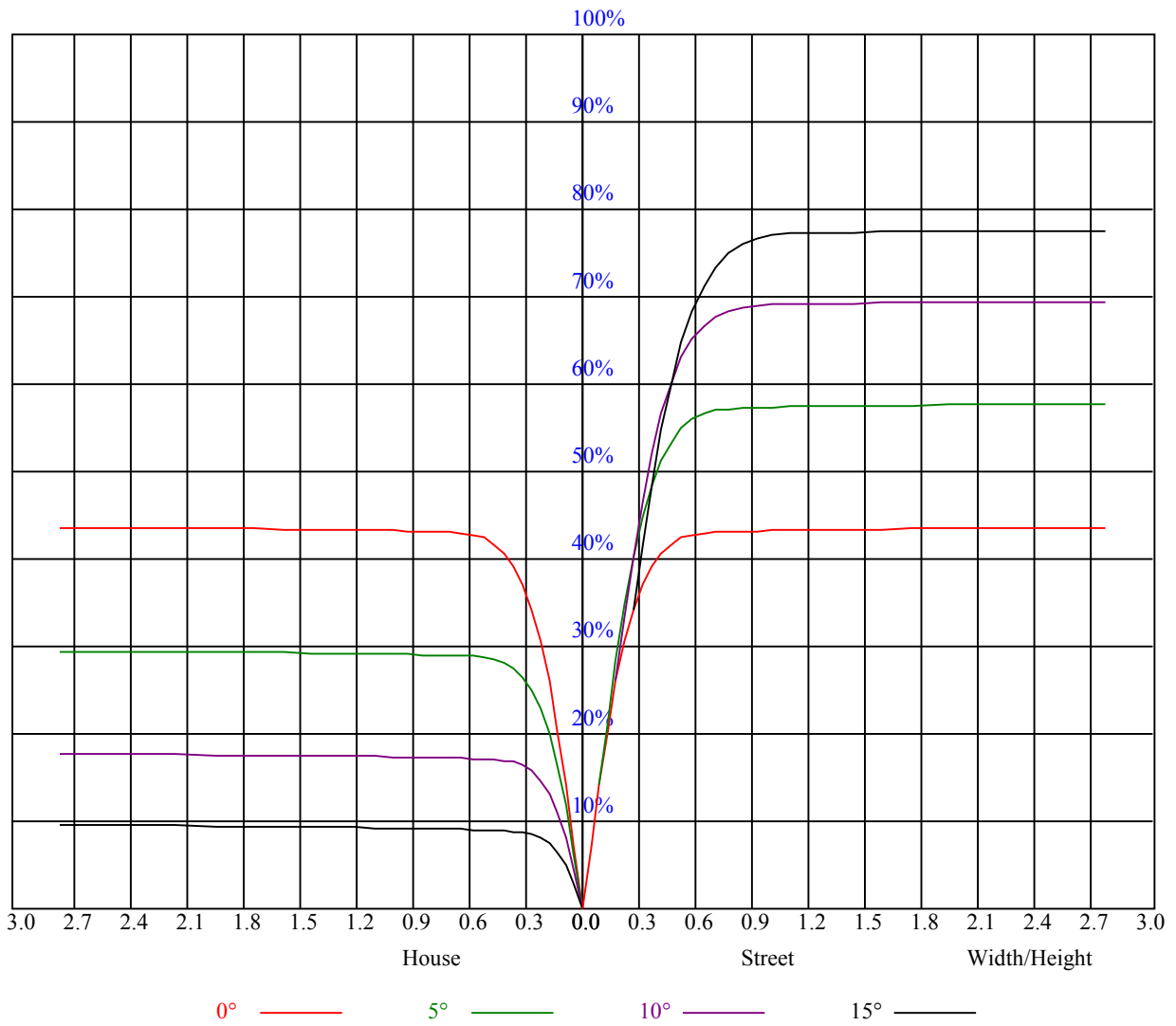
Date: 2019/3/6
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

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	1.06	1.06	1.06	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.91	0.91	0.91	0.89
1	0.98	0.95	0.93	0.96	0.94	0.92	0.92	0.90	0.89	0.89	0.88	0.86	0.86	0.85	0.84	0.82
2	0.93	0.90	0.87	0.92	0.89	0.86	0.89	0.87	0.85	0.86	0.84	0.83	0.84	0.82	0.81	0.80
3	0.90	0.86	0.83	0.88	0.85	0.82	0.86	0.83	0.81	0.84	0.82	0.80	0.82	0.80	0.79	0.77
4	0.86	0.82	0.80	0.85	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.75
5	0.83	0.80	0.77	0.83	0.79	0.76	0.81	0.78	0.76	0.80	0.77	0.75	0.79	0.76	0.74	0.73
6	0.81	0.77	0.74	0.80	0.77	0.74	0.79	0.76	0.73	0.78	0.75	0.73	0.77	0.74	0.73	0.72
7	0.79	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.72	0.76	0.73	0.71	0.75	0.73	0.71	0.70
8	0.76	0.73	0.70	0.76	0.72	0.70	0.75	0.72	0.70	0.74	0.72	0.69	0.74	0.71	0.69	0.68
9	0.74	0.71	0.68	0.74	0.71	0.68	0.73	0.70	0.68	0.73	0.70	0.68	0.72	0.70	0.68	0.67
10	0.73	0.69	0.67	0.72	0.69	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.71	0.68	0.66	0.65



Equipment: GMS1980
 Temperature(°C): 10.0
 Date: 2019/3/6
 Humidity(%): 65.0%
 Operator: NT07
 Distance(m): 7.50



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Intensity data(cd)

C/ γ ($^{\circ}$)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	8830.69	8226.00	6321.94	3837.38	2180.81	1081.69	336.38	30.71	17.38
45.0	8843.06	7999.88	5918.06	3605.63	1938.38	943.88	291.38	25.20	16.31
90.0	8786.81	7392.38	5172.75	2939.06	1546.88	765.06	148.89	21.83	15.58
135.0	8878.50	7798.50	5695.88	3296.81	1782.00	914.63	304.31	21.99	15.53
180.0	8830.69	7716.94	5306.63	3169.13	1731.94	832.16	178.54	20.14	15.08
225.0	8843.06	7954.88	5693.06	3340.13	1902.94	954.84	250.48	23.12	15.36
270.0	8786.81	8309.25	6546.94	4016.25	2237.63	1172.81	439.31	33.13	16.76
315.0	8878.50	8121.38	5806.13	3614.63	1949.63	910.58	305.49	27.11	16.20
360.0	8830.69	8226.00	6321.94	3837.38	2180.81	1081.69	336.38	30.71	17.38
C/ γ ($^{\circ}$)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	13.84	11.87	10.63	9.96	9.62	9.45	9.23	9.06	8.94
45.0	13.16	11.48	10.24	9.68	9.34	9.17	8.94	8.78	8.66
90.0	12.66	11.19	10.29	9.73	9.39	9.17	9.00	8.83	8.66
135.0	12.66	11.14	10.35	9.84	9.51	9.34	9.17	9.00	8.78
180.0	12.43	11.03	10.07	9.62	9.39	9.28	9.11	8.94	8.83
225.0	12.43	10.86	9.90	9.45	9.17	9.06	8.94	8.78	8.66
270.0	13.11	11.36	10.35	9.84	9.45	9.23	9.11	8.94	8.72
315.0	13.05	11.53	10.52	10.01	9.62	9.39	9.17	9.00	8.83
360.0	13.84	11.87	10.63	9.96	9.62	9.45	9.23	9.06	8.94
C/ γ ($^{\circ}$)	90.0								
0.0	8.72								
45.0	8.38								
90.0	8.44								
135.0	8.49								
180.0	8.55								
225.0	8.33								
270.0	8.49								
315.0	8.55								
360.0	8.72								



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