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## Nata

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### Client:

LumCAT: 3-2117-N

Luminaire: 92.70.131.00

Report No: nata-0100

Test No:

LampCAT: CREE CMT1922

Lamp flux(lm): 2807.4

Number of Lamps: 1

Length(mm): 74

Phm Type: C

Voltage(V): 35.6000

Current(A): 0.6000

Power (W): 21.3600

PF: 0.0000

Ballast type: DC

Width(mm): 74

Height(mm): 0

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## Photometric Results

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Lumens(lm): 2345.64, Efficiency(%): 83.55% , Luminous Efficacy(lm/W): 109.81

Central intensity(cd): 6011.471, Maximum intensity(cd): 6011.471

Angle of maximum intensity: C=0.0  $\gamma$ =0.0

Beam Angle(50%Imax): [C0/180]Total=36.0

[C90/270]Total=36.0

Field angle(10%Imax): [C0/180]Total=58.6

[C90/270]Total=58.6

Maximum s/h(1/2): C0\_180=0.60 C90\_270=0.60

Maximum s/h(1/4): C0\_180=0.57 C90\_270=0.57

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.75%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 97.003%

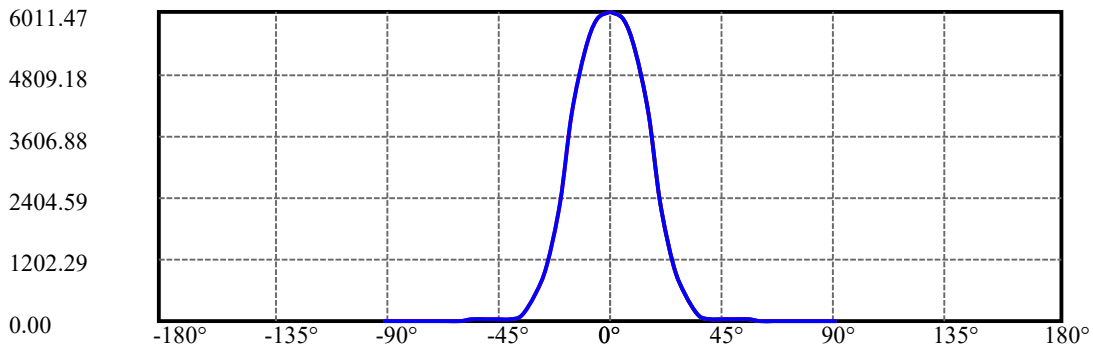
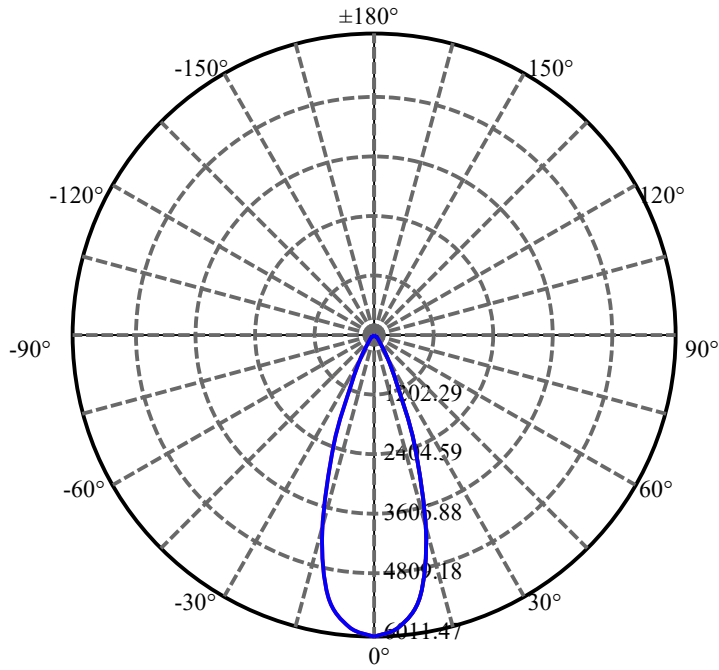
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6011.471	35.950	35.95	1.281%	1.533%
5.0	5847.127	279.337	315.286	9.950%	13.441%
10.0	5283.075	502.859	818.146	17.912%	34.879%
15.0	4027.444	571.367	1389.513	20.352%	59.238%
20.0	2310.717	433.199	1822.712	15.431%	77.706%
25.0	1085.458	251.449	2074.162	8.957%	88.426%
30.0	527.048	144.447	2218.609	5.145%	94.584%
35.0	107.071	33.663	2252.272	1.199%	96.019%
40.0	46.585	16.413	2268.685	.585%	96.719%
45.0	31.004	12.017	2280.702	.428%	97.231%
50.0	23.908	10.039	2290.741	.358%	97.659%
55.0	19.924	8.946	2299.687	.319%	98.041%
60.0	17.625	8.367	2308.053	.298%	98.397%
65.0	15.925	7.911	2315.965	.282%	98.735%
70.0	14.604	7.522	2323.487	.268%	99.055%
75.0	13.303	7.043	2330.53	.251%	99.356%
80.0	12.064	6.512	2337.043	.232%	99.633%
85.0	10.832	5.915	2342.958	.211%	99.885%
90.0	9.800	2.686	2345.644	.096%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2218.61	79.03%	94.58%
0-40	2268.69	80.81%	96.72%
0-60	2308.05	82.21%	98.40%
0-90	2342.96	83.46%	99.89%
0-120	2342.96	83.46%	99.89%
0-180	2345.64	83.55%	100.00%
60-90	43.27	1.54%	1.84%
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%
0-21.07	1876.52	66.84%	80.00%

ZONAL LUMEN SUMMARY

0-10	818.15
10-20	1004.57
20-30	395.90
30-40	50.08
40-50	22.06
50-60	17.31
60-70	15.43
70-80	13.56
80-90	5.92
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: —————

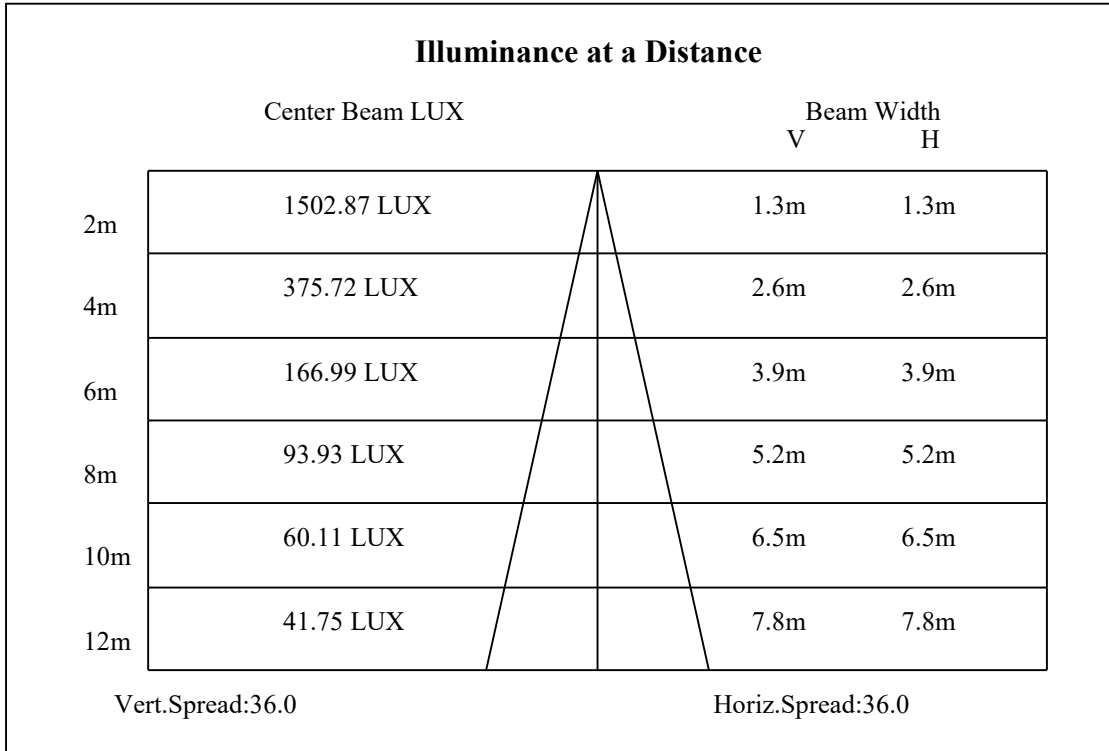
C90/C270: —————

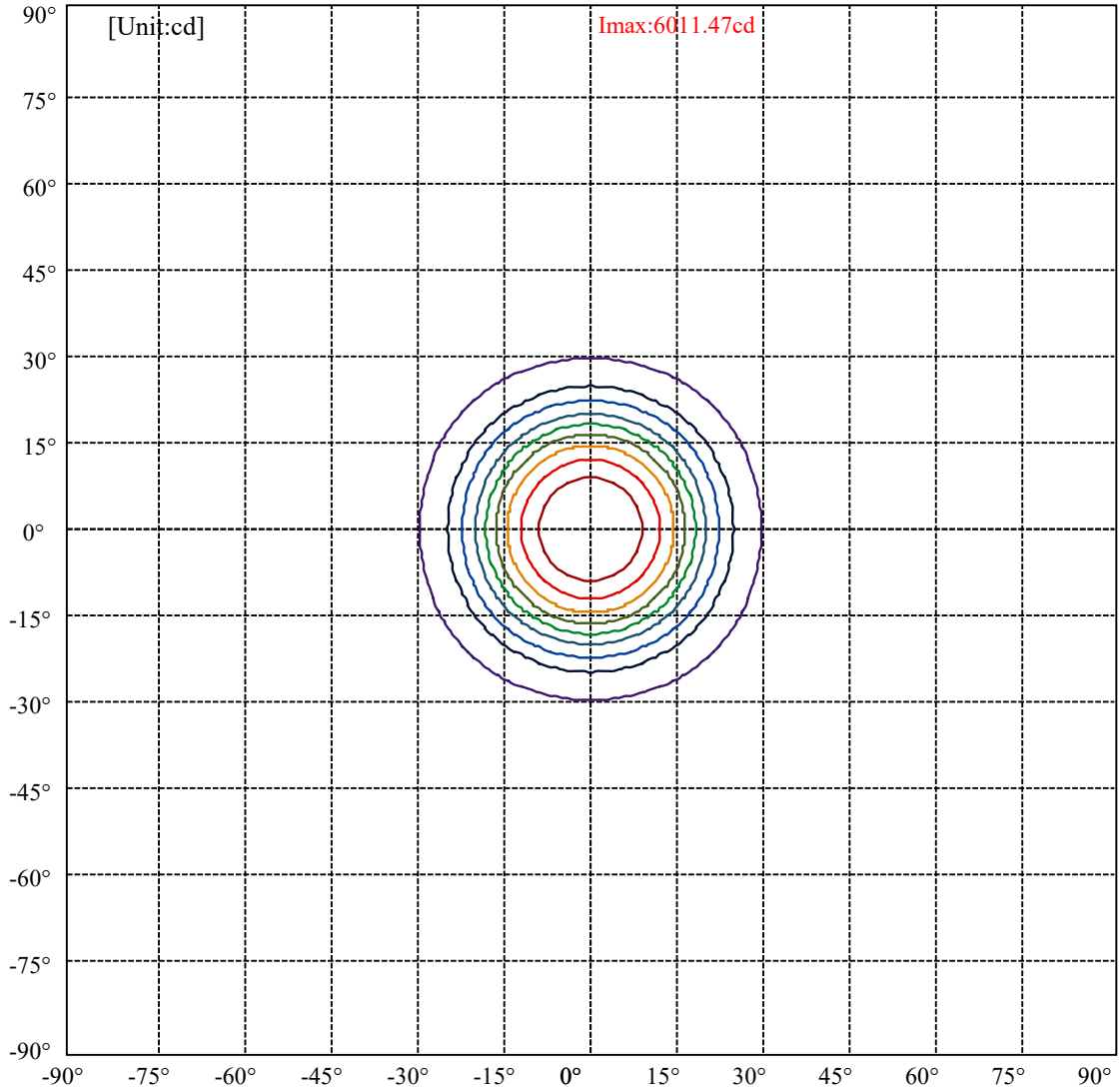
Field angle(10%Imax):C0/180Left:29.3 Right:29.3

:C90/270Left:29.3 Right:29.3

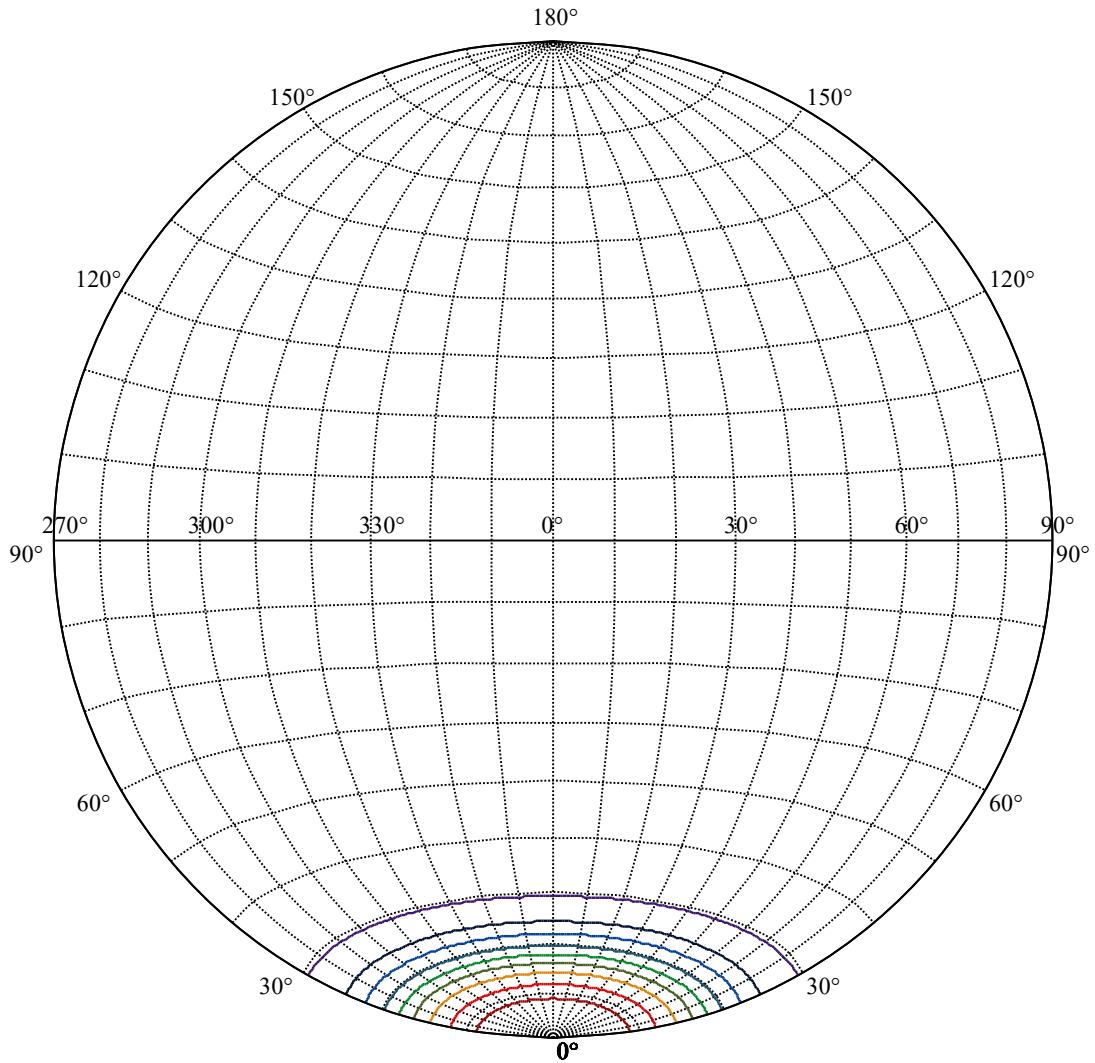
Beam Angle(50%Imax):C0/180Left:18.0 Right:18.0

:C90/270Left:18.0 Right:18.0





(10%Imax) 601.147	—
(20%Imax) 1202.29	—
(30%Imax) 1803.44	—
(40%Imax) 2404.59	—
(50%Imax) 3005.74	—
(60%Imax) 3606.88	—
(70%Imax) 4208.03	—
(80%Imax) 4809.18	—
(90%Imax) 5410.32	—



House

[Unit:cd]

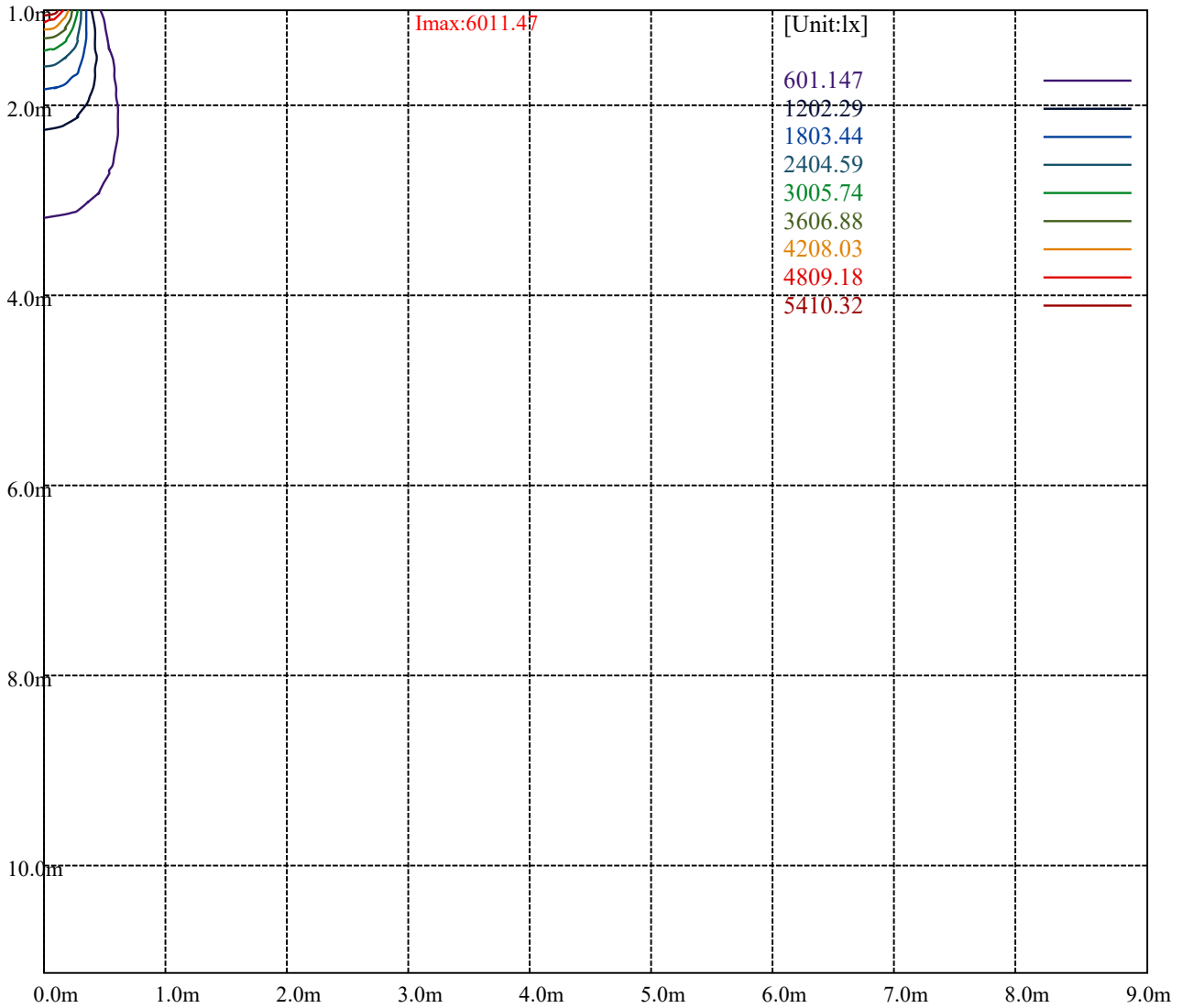
Road

**Imax:6011.47**

(10%Imax) 601.147	—
(20%Imax) 1202.29	—
(30%Imax) 1803.44	—
(40%Imax) 2404.59	—
(50%Imax) 3005.74	—
(60%Imax) 3606.88	—
(70%Imax) 4208.03	—
(80%Imax) 4809.18	—
(90%Imax) 5410.32	—







Luminance Table

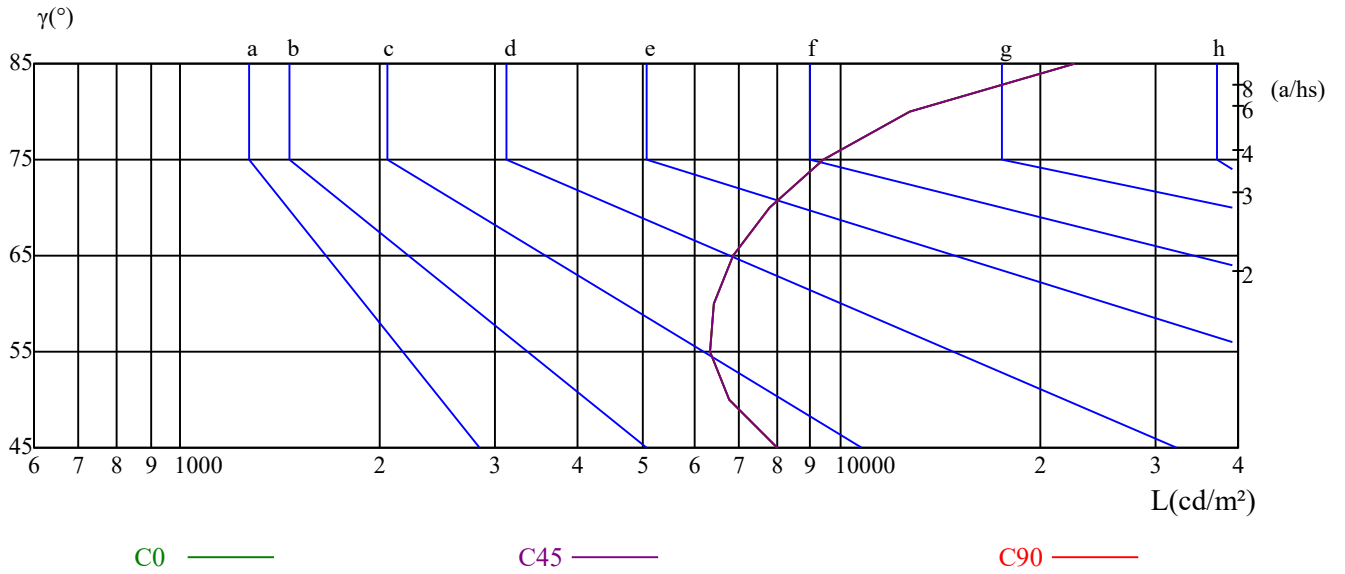
$\gamma$	45	50	55	60	65	70	75	80	85
C0	8007	6792	6343	6437	6881	7797	9386	12687	22697
C45	8007	6792	6343	6437	6881	7797	9386	12687	22697
C90	8007	6792	6343	6437	6881	7797	9386	12687	22697

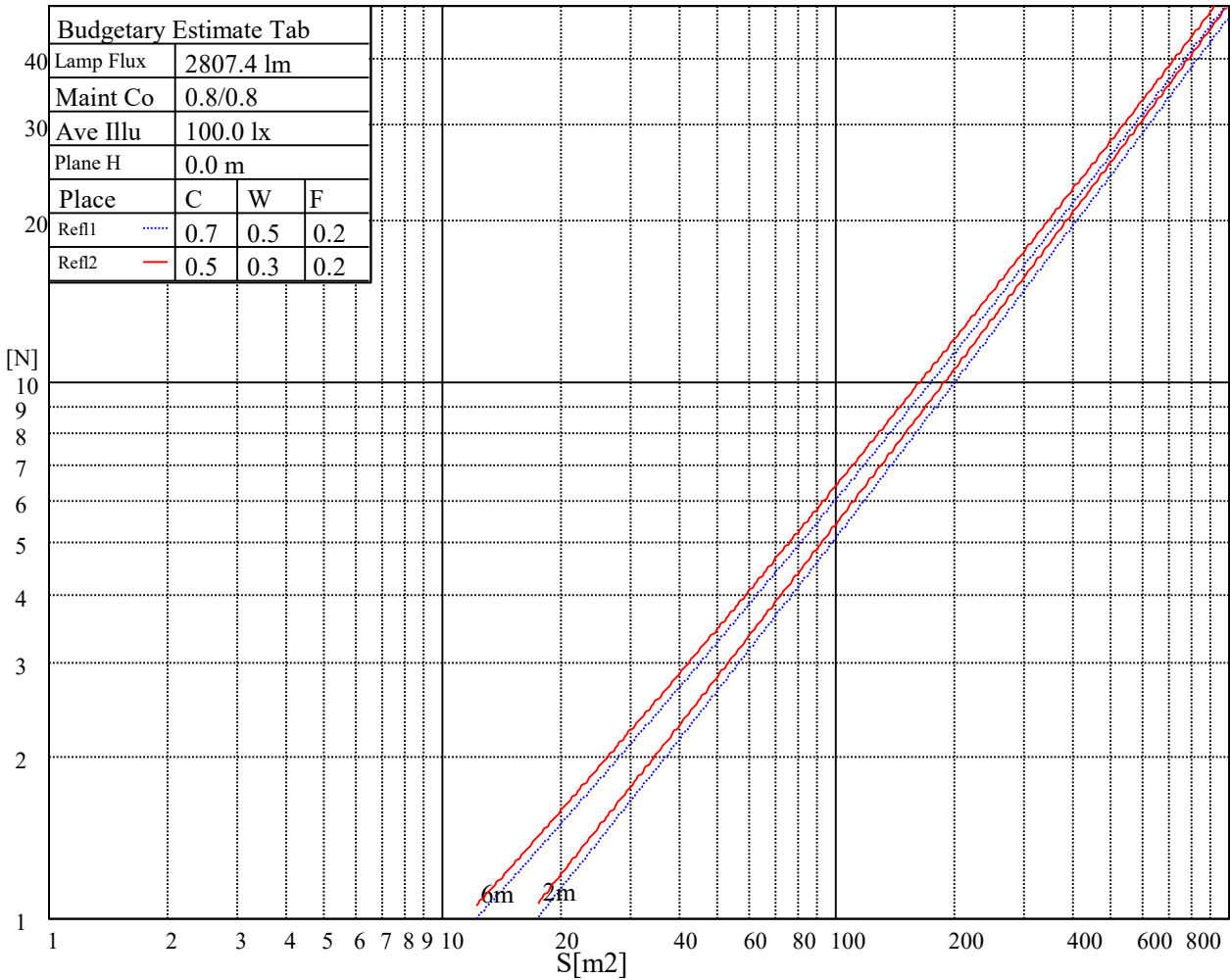
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6881	6881	6881	9386	9386	9386	22697	22697	22697

Glare Table

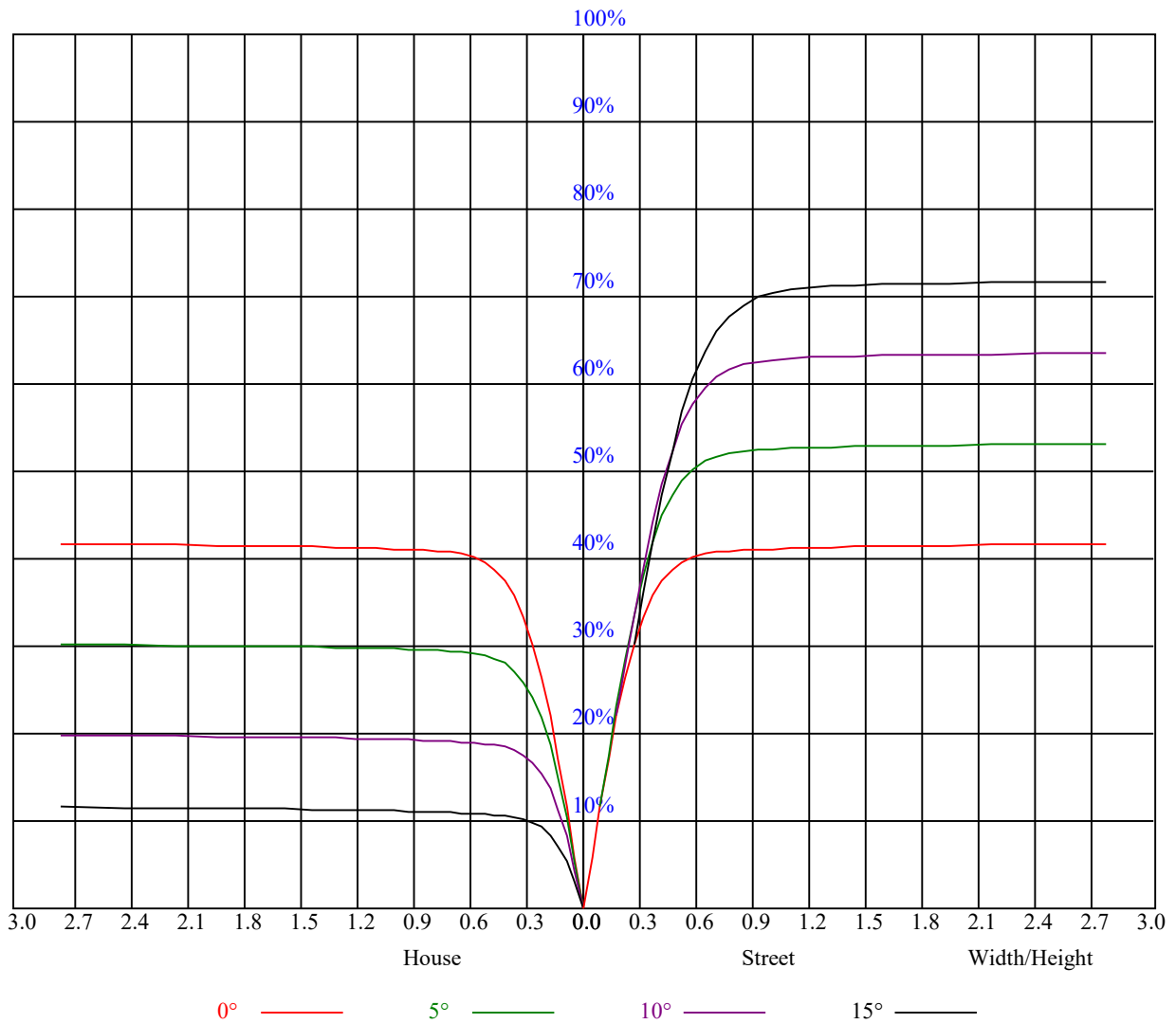
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

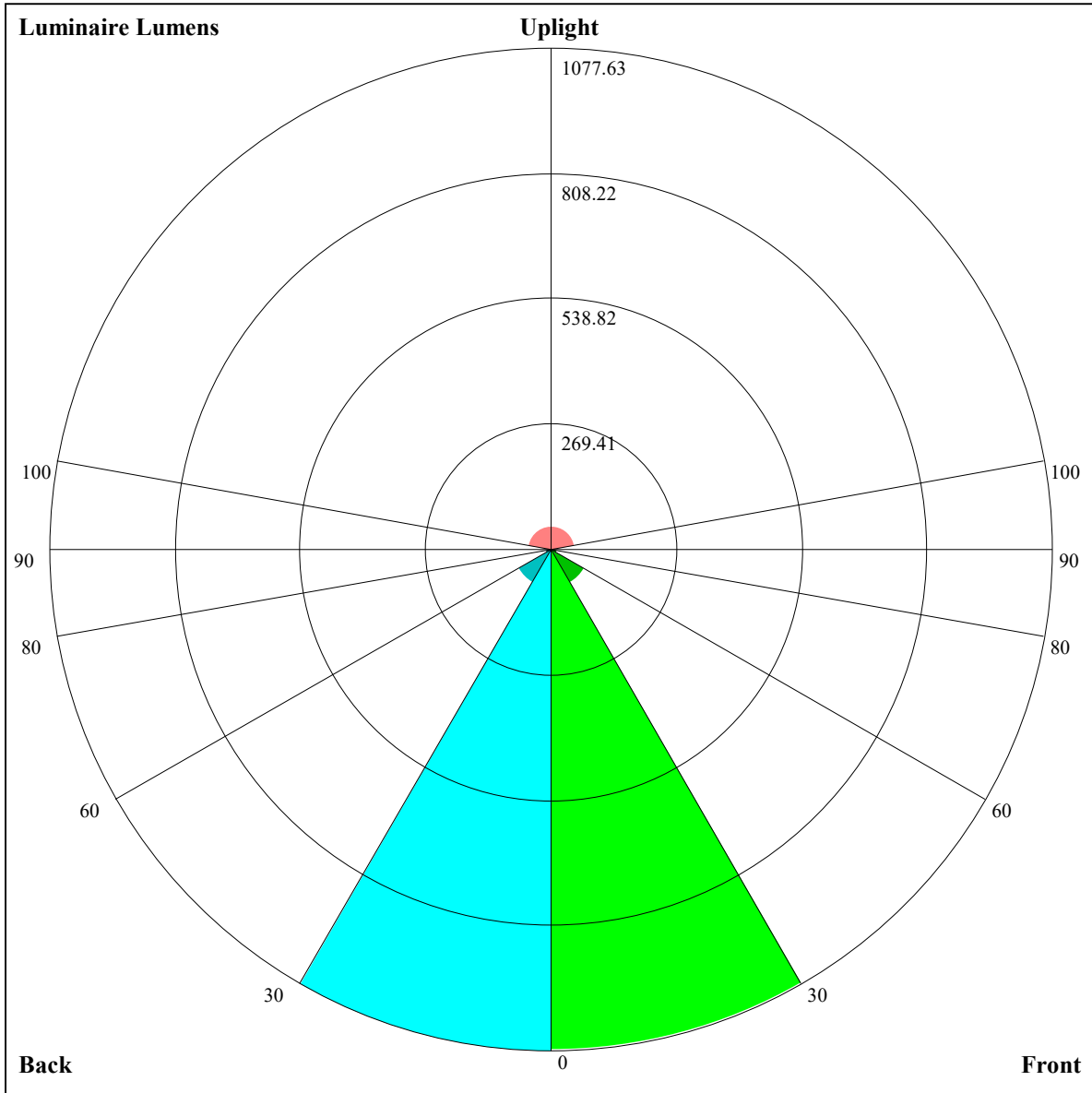
Luminance Limiting Curve





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	1.01	1.01	1.01	0.99	0.99	0.99	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	0.85
1	0.94	0.91	0.89	0.92	0.90	0.88	0.88	0.87	0.85	0.85	0.84	0.83	0.82	0.81	0.80	0.79
2	0.89	0.86	0.83	0.87	0.85	0.82	0.85	0.82	0.81	0.82	0.80	0.79	0.80	0.78	0.77	0.76
3	0.85	0.81	0.78	0.84	0.80	0.78	0.82	0.79	0.77	0.80	0.77	0.75	0.78	0.76	0.74	0.73
4	0.81	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.73	0.77	0.75	0.73	0.76	0.73	0.72	0.71
5	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.68
6	0.75	0.72	0.69	0.75	0.71	0.69	0.74	0.70	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.66
7	0.73	0.69	0.66	0.72	0.69	0.66	0.71	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.64
8	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.62
9	0.68	0.65	0.62	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.62	0.61
10	0.66	0.63	0.60	0.66	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.60	0.59





Luminaire Lumens:

FL=1075.66,FM=82.7,FH=15,FVH=5.94

BL=1077.63,BM=82.77,BH=15.01,BVH=5.95

UL=10.69,UH=50.88

BUG Rating:B3-U2-G0

Intensity data(cd)

C/ $\gamma$ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	6002.25	5861.85	5340.47	4059.86	2415.32	1119.85	559.37	92.60	47.46
45.0	6039.14	5754.49	5157.13	4021.32	2214.92	1049.93	459.72	85.28	46.03
90.0	5987.93	5627.31	4962.23	3599.59	1871.92	1022.89	398.77	68.82	42.17
135.0	6016.56	5793.58	5191.27	4125.93	2336.04	1125.35	532.95	80.00	46.74
180.0	6002.25	5792.48	5159.89	3758.15	2201.71	1084.39	465.06	77.90	44.87
225.0	6039.14	6003.35	5417.55	4106.66	2454.96	1078.00	585.08	90.18	48.34
270.0	5987.93	6034.18	5684.57	4492.60	2735.20	1173.80	686.00	278.59	50.87
315.0	6016.56	5909.75	5351.48	4055.45	2255.66	1029.44	529.42	83.19	46.19
360.0	6002.25	5861.85	5340.47	4059.86	2415.32	1119.85	559.37	92.60	47.46
C/ $\gamma$ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	31.33	24.45	19.99	17.56	15.86	14.59	13.27	12.00	10.74
45.0	30.23	23.67	19.77	17.51	15.91	14.59	13.32	12.11	10.74
90.0	28.79	22.79	19.21	17.34	15.69	14.37	13.16	11.78	10.68
135.0	30.72	23.67	20.15	17.67	15.97	14.65	13.32	12.06	10.79
180.0	29.95	23.45	19.55	17.34	15.69	14.37	13.05	11.78	10.68
225.0	31.71	24.11	20.15	17.78	16.02	14.70	13.38	12.22	11.07
270.0	34.02	25.33	20.76	18.28	16.41	15.03	13.71	12.50	11.12
315.0	31.27	23.78	19.82	17.51	15.86	14.53	13.21	12.06	10.85
360.0	31.33	24.45	19.99	17.56	15.86	14.59	13.27	12.00	10.74
C/ $\gamma$ (°)	90.0								
0.0	9.74								
45.0	9.74								
90.0	9.86								
135.0	9.80								
180.0	9.74								
225.0	9.80								
270.0	9.91								
315.0	9.80								
360.0	9.74								