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## Nata

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LumCAT: 2-1122-A4  
Luminaire: 99.02.73.172+92.76.365.00  
Report No: NATA0100  
Test No: GC2018082803  
LampCAT: BRIDGELUX V13B  
Lamp flux(lm): 2575.0  
Number of Lamps: 1  
Length(mm): 70  
Phm Type: C

Voltage(V): 34.0000  
Current(A): 0.5000  
Power (W): 17.0000  
PF: 0.0000  
Ballast type: DC  
Width(mm): 70  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 2374.67  
Efficiency(%): 92.22%  
Lumens(lm)/Power(W): 139.69  
Central intensity(cd): 5540.601  
Maximum intensity(cd): 5540.601  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=34.3  
                                  [C90/270]Total=34.3  
Field angle(10%Imax): [C0/180]Total=70.5  
                                  [C90/270]Total=70.5  
Maximum s/h(1/2): C0\_180=0.57 C90\_270=0.57  
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(%): 93.42%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.433%

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Equipment: GMS1980  
Temperature(°C): 25.0

Date: 2018/8/28  
Humidity(%): 60.0%

Operator: NT07  
Distance(m): 7.42

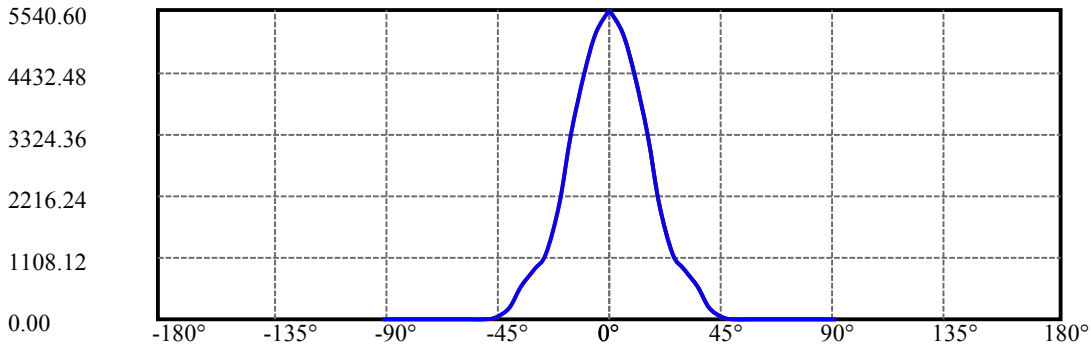
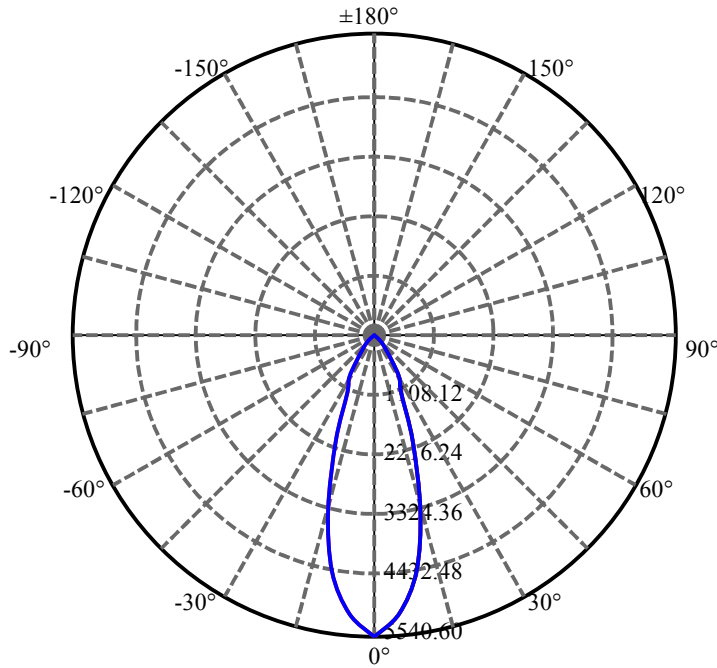
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5540.601	33.134	33.134	1.287%	1.395%
5.0	5138.139	245.466	278.6	9.533%	11.732%
10.0	4394.946	418.324	696.924	16.246%	29.348%
15.0	3319.557	470.940	1167.864	18.289%	49.180%
20.0	2056.838	385.604	1553.468	14.975%	65.418%
25.0	1175.447	272.296	1825.764	10.575%	76.885%
30.0	882.589	241.890	2067.654	9.394%	87.071%
35.0	572.882	180.114	2247.767	6.995%	94.656%
40.0	201.231	70.901	2318.668	2.753%	97.642%
45.0	23.069	8.941	2327.609	.347%	98.018%
50.0	12.828	5.387	2332.996	.209%	98.245%
55.0	11.954	5.367	2338.363	.208%	98.471%
60.0	11.438	5.430	2343.793	.211%	98.700%
65.0	11.059	5.494	2349.287	.213%	98.931%
70.0	10.825	5.576	2354.863	.217%	99.166%
75.0	10.633	5.630	2360.493	.219%	99.403%
80.0	10.509	5.673	2366.166	.220%	99.642%
85.0	10.399	5.678	2371.844	.221%	99.881%
90.0	10.302	2.824	2374.667	.110%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2067.65	80.30%	87.07%
0-40	2318.67	90.05%	97.64%
0-60	2343.79	91.02%	98.70%
0-90	2371.84	92.11%	99.88%
0-120	2371.84	92.11%	99.88%
0-180	2374.67	92.22%	100.00%
60-90	33.48	1.30%	1.41%
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%
0-26.53	1899.73	73.78%	80.00%

ZONAL LUMEN SUMMARY

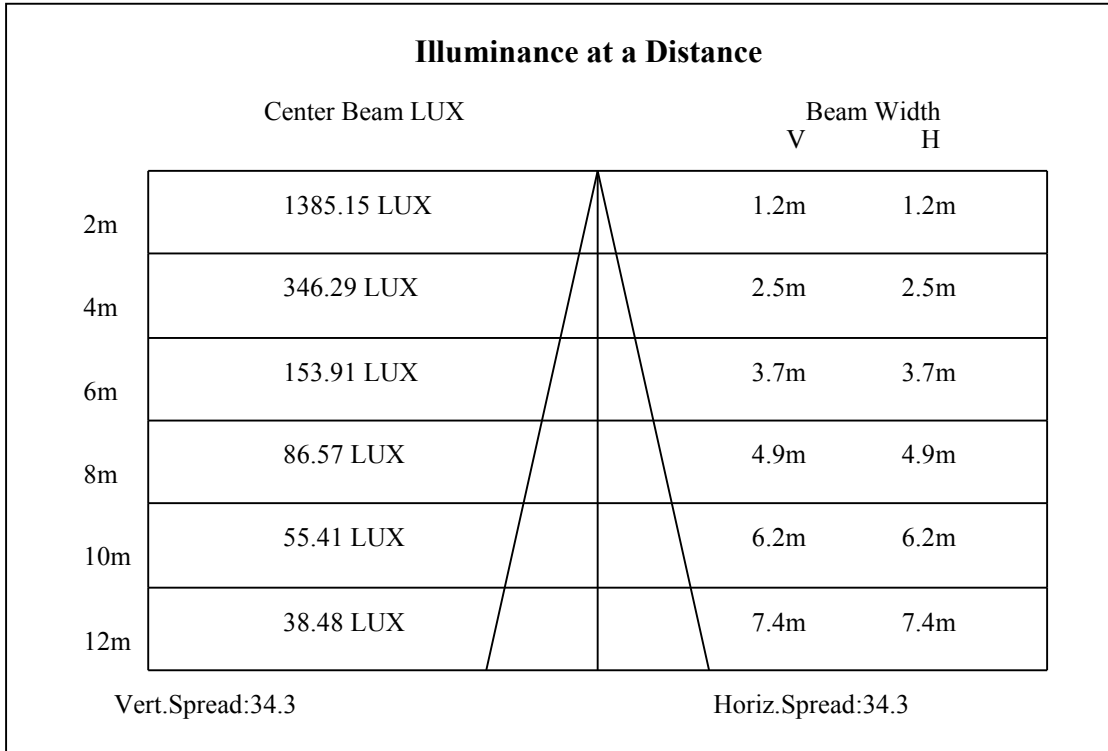
0-10	696.92
10-20	856.54
20-30	514.19
30-40	251.01
40-50	14.33
50-60	10.80
60-70	11.07
70-80	11.30
80-90	5.68
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

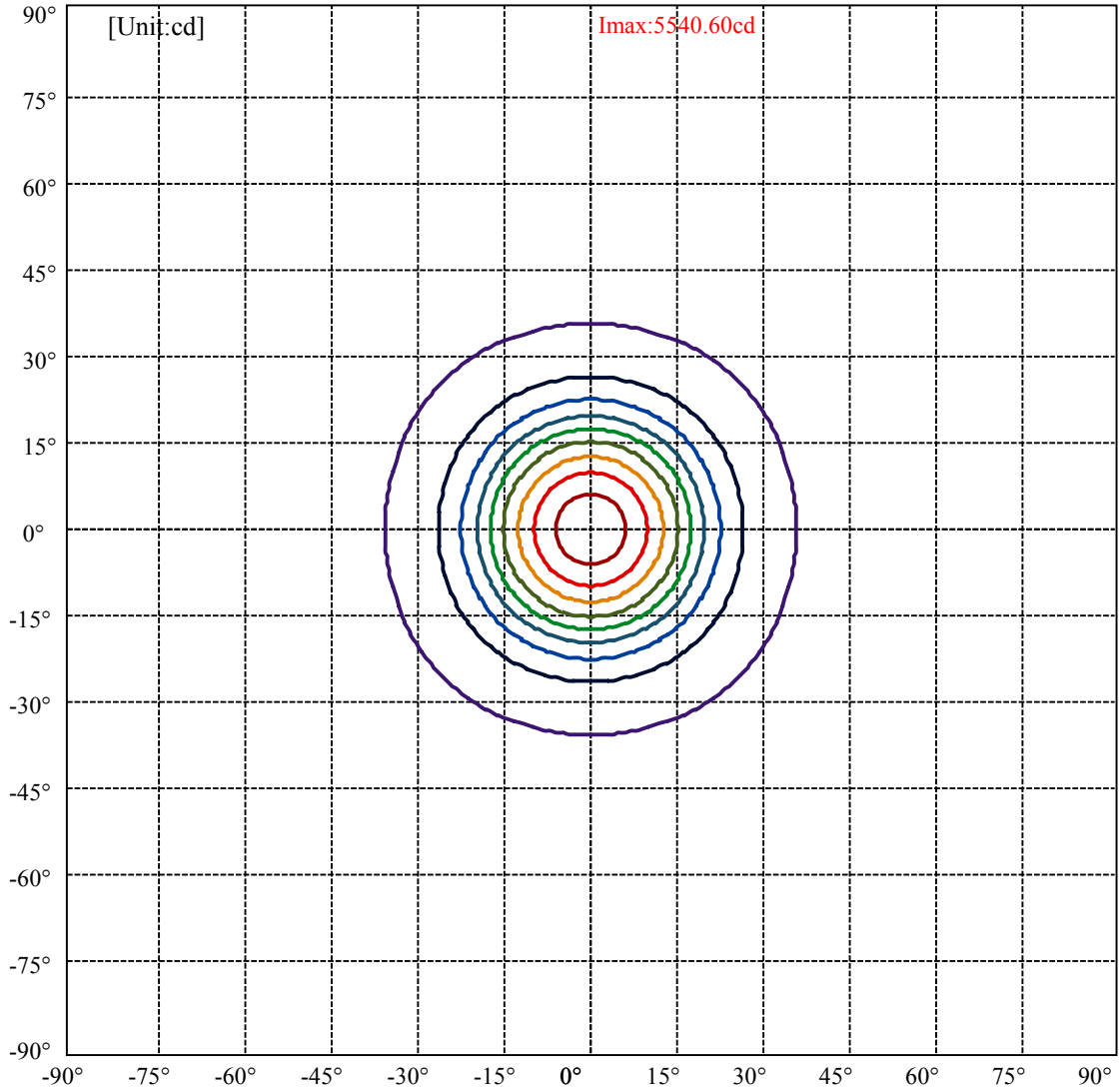


C0(Max): —————  
 C0/C180: —————  
 C90/C270: —————

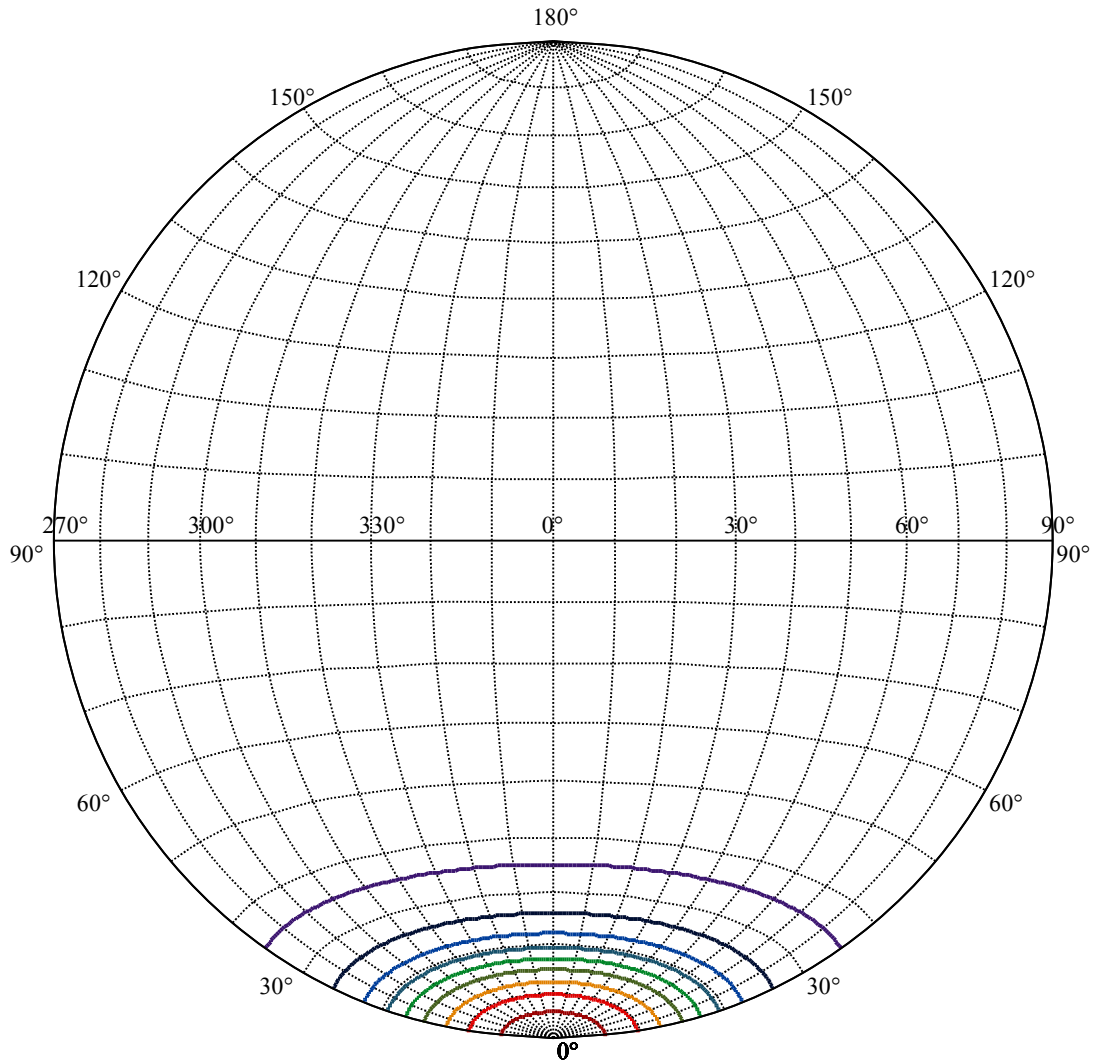
Field angle(10%Imax):C0/180Left:35.3 Right:35.3  
 :C90/270Left:35.3 Right:35.3

Beam Angle(50%Imax):C0/180Left:17.2 Right:17.2  
 :C90/270Left:17.2 Right:17.2





(10%Imax) 554.06	—
(20%Imax) 1108.12	—
(30%Imax) 1662.18	—
(40%Imax) 2216.24	—
(50%Imax) 2770.3	—
(60%Imax) 3324.36	—
(70%Imax) 3878.42	—
(80%Imax) 4432.48	—
(90%Imax) 4986.54	—



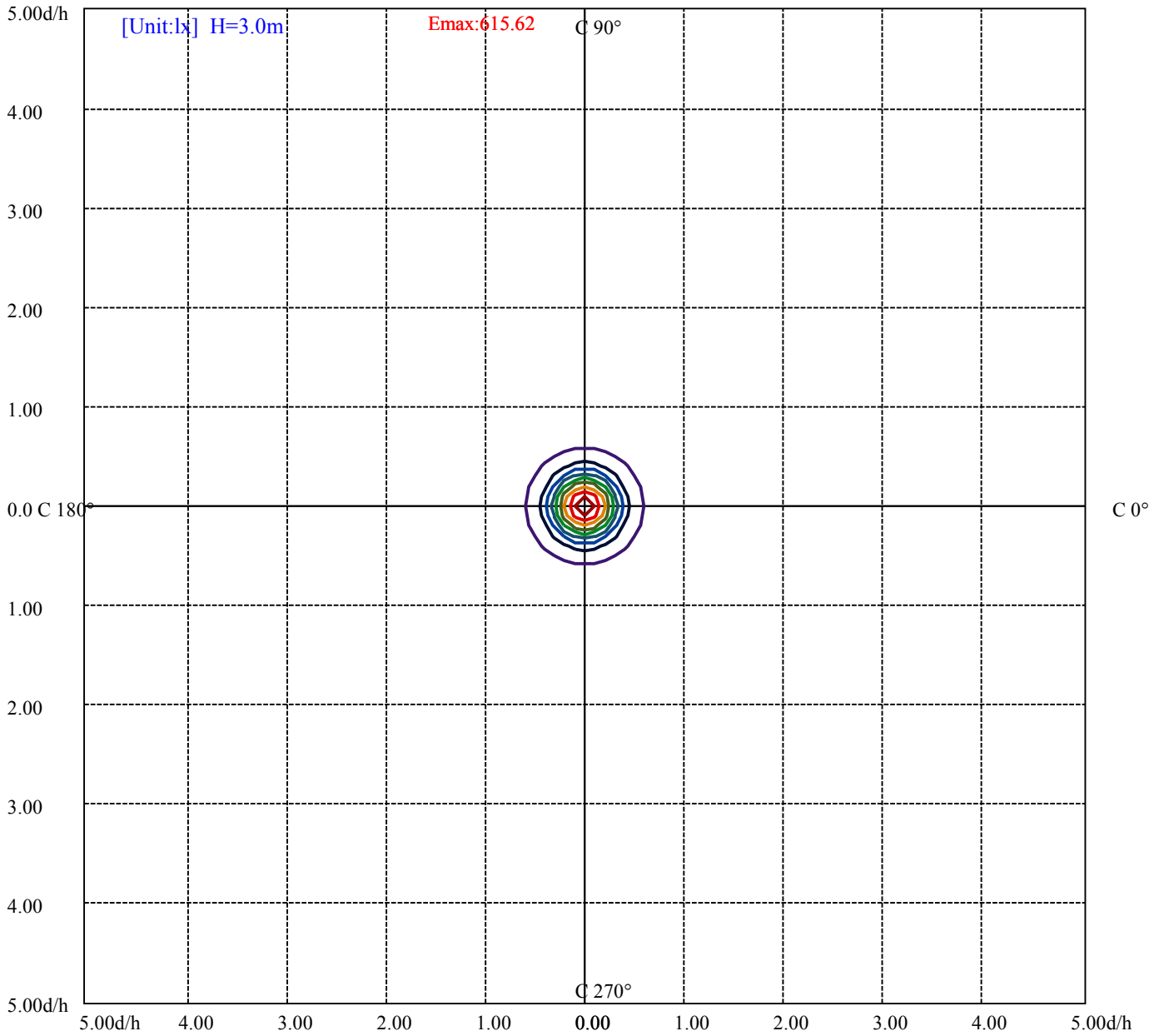
House

[Unit:cd]

Road

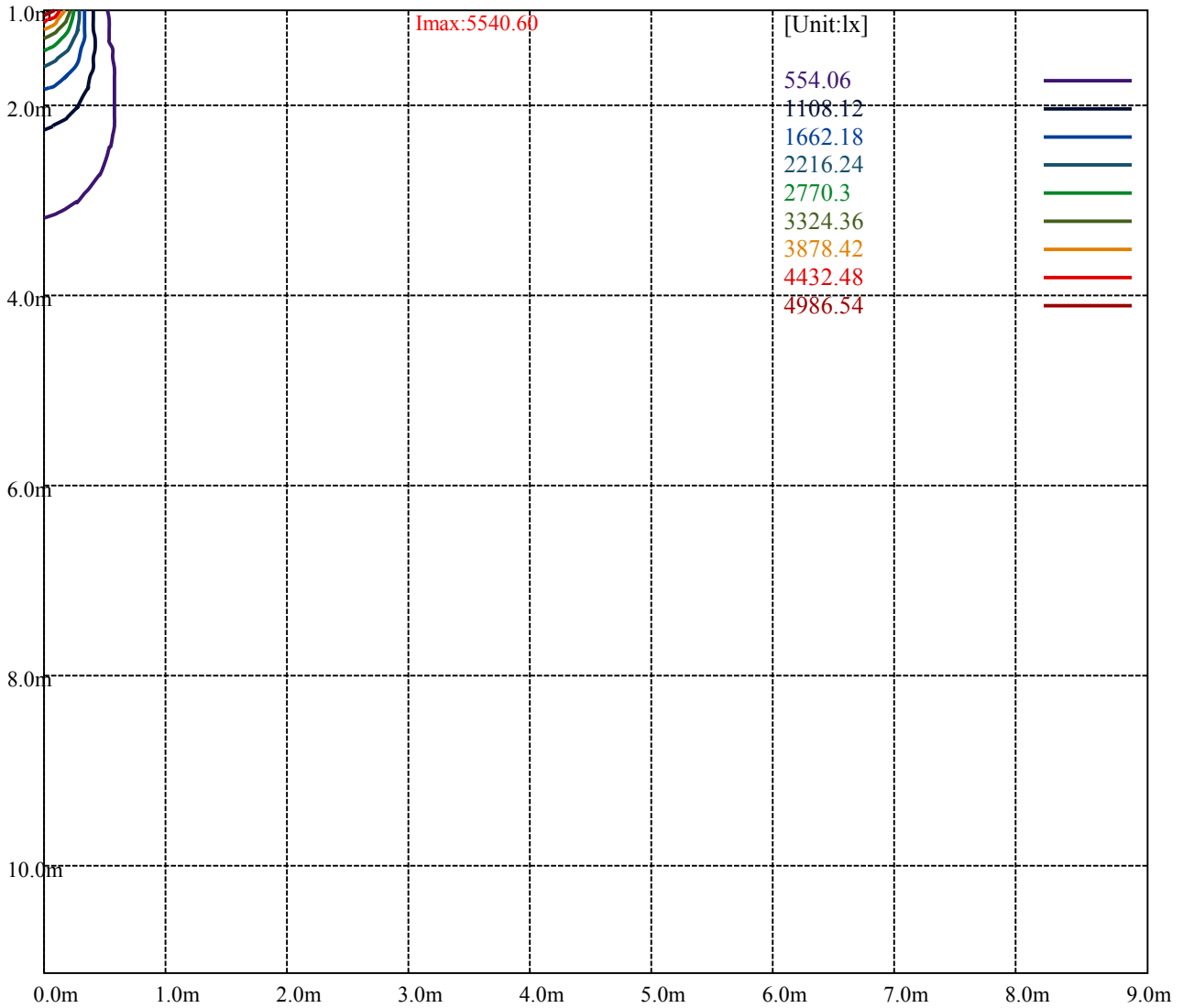
Imax:5540.60

(10%Imax) 554.06	—
(20%Imax) 1108.12	—
(30%Imax) 1662.18	—
(40%Imax) 2216.24	—
(50%Imax) 2770.3	—
(60%Imax) 3324.36	—
(70%Imax) 3878.42	—
(80%Imax) 4432.48	—
(90%Imax) 4986.54	—



- (10%Emax) 61.56211
- (20%Emax) 123.1244
- (30%Emax) 184.6867
- (40%Emax) 246.2489
- (50%Emax) 307.81
- (60%Emax) 369.3722
- (70%Emax) 430.9344
- (80%Emax) 492.4967
- (90%Emax) 554.0588





Luminance Table

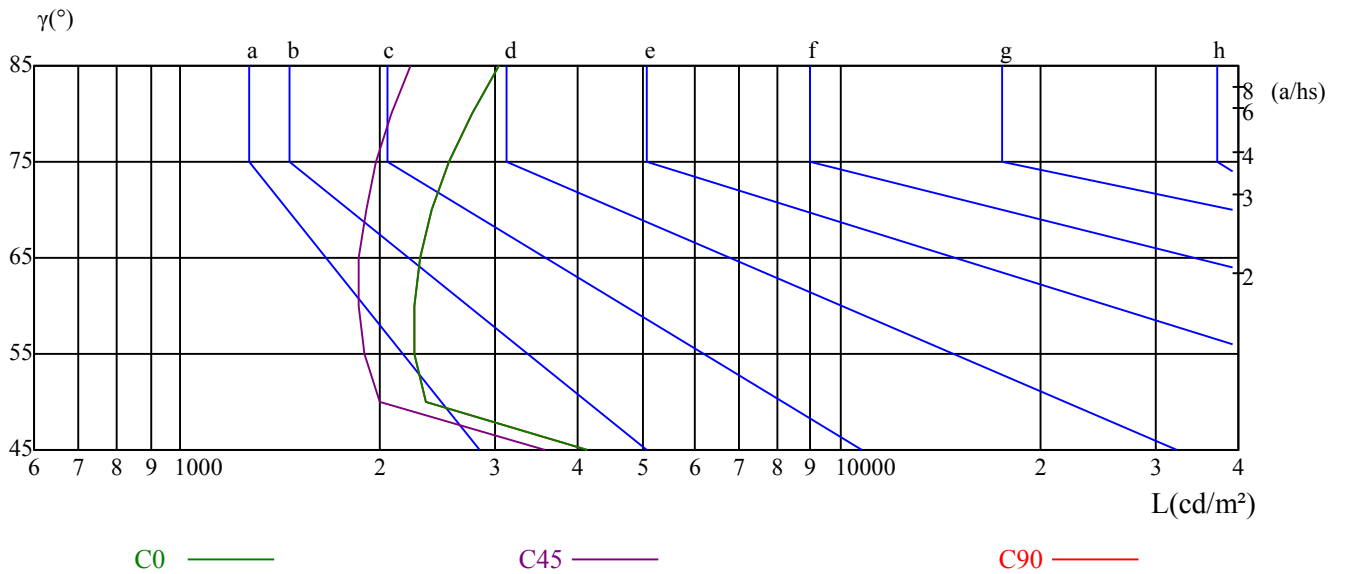
$\gamma$	45	50	55	60	65	70	75	80	85
C0	4124	2351	2266	2262	2305	2403	2546	2755	3036
C45	3563	2001	1898	1864	1865	1907	1976	2084	2228
C90	4124	2351	2266	2262	2305	2403	2546	2755	3036

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
5341	5341	5341	8384	8384	8384	24350	24350	24350

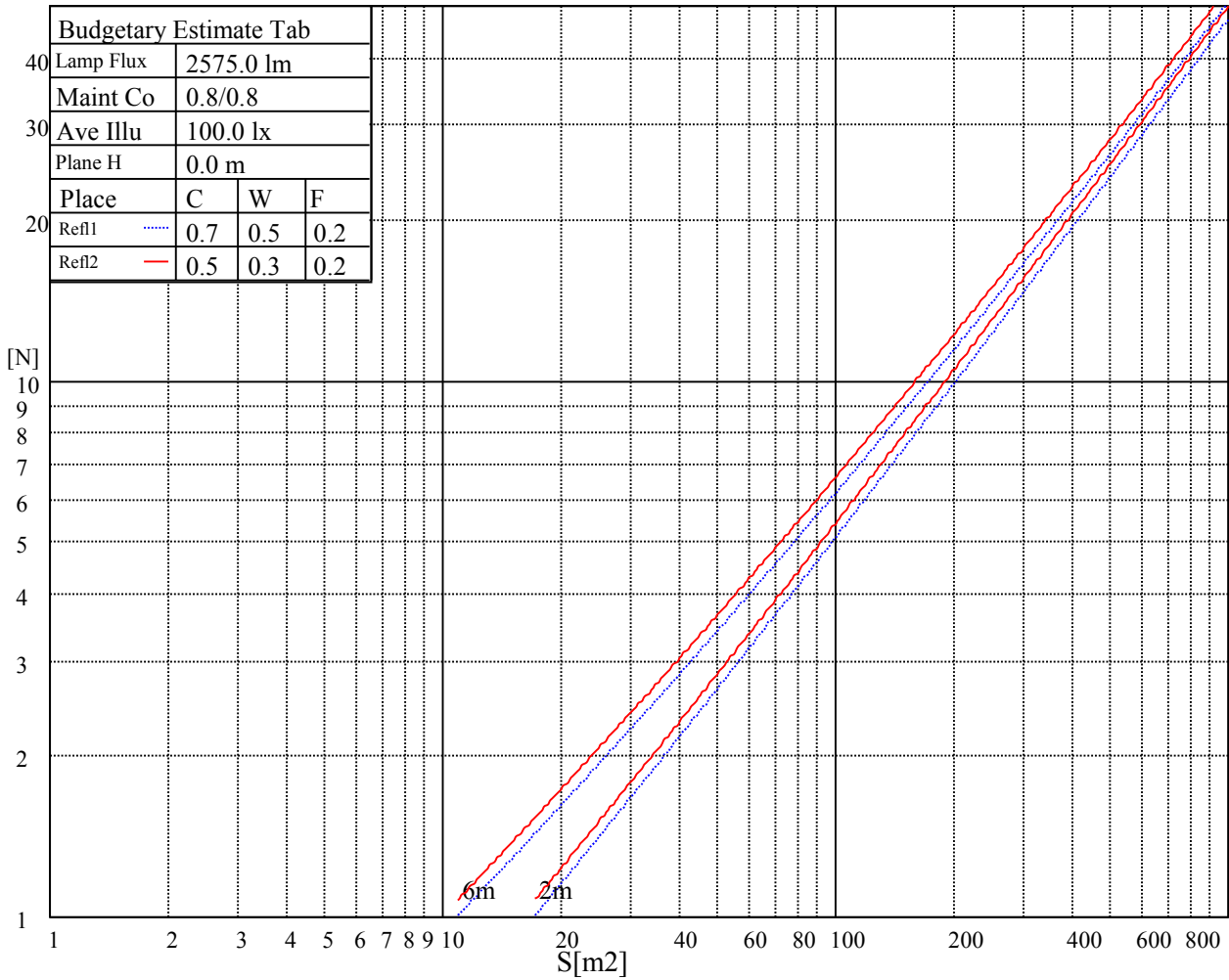
Glare Table

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

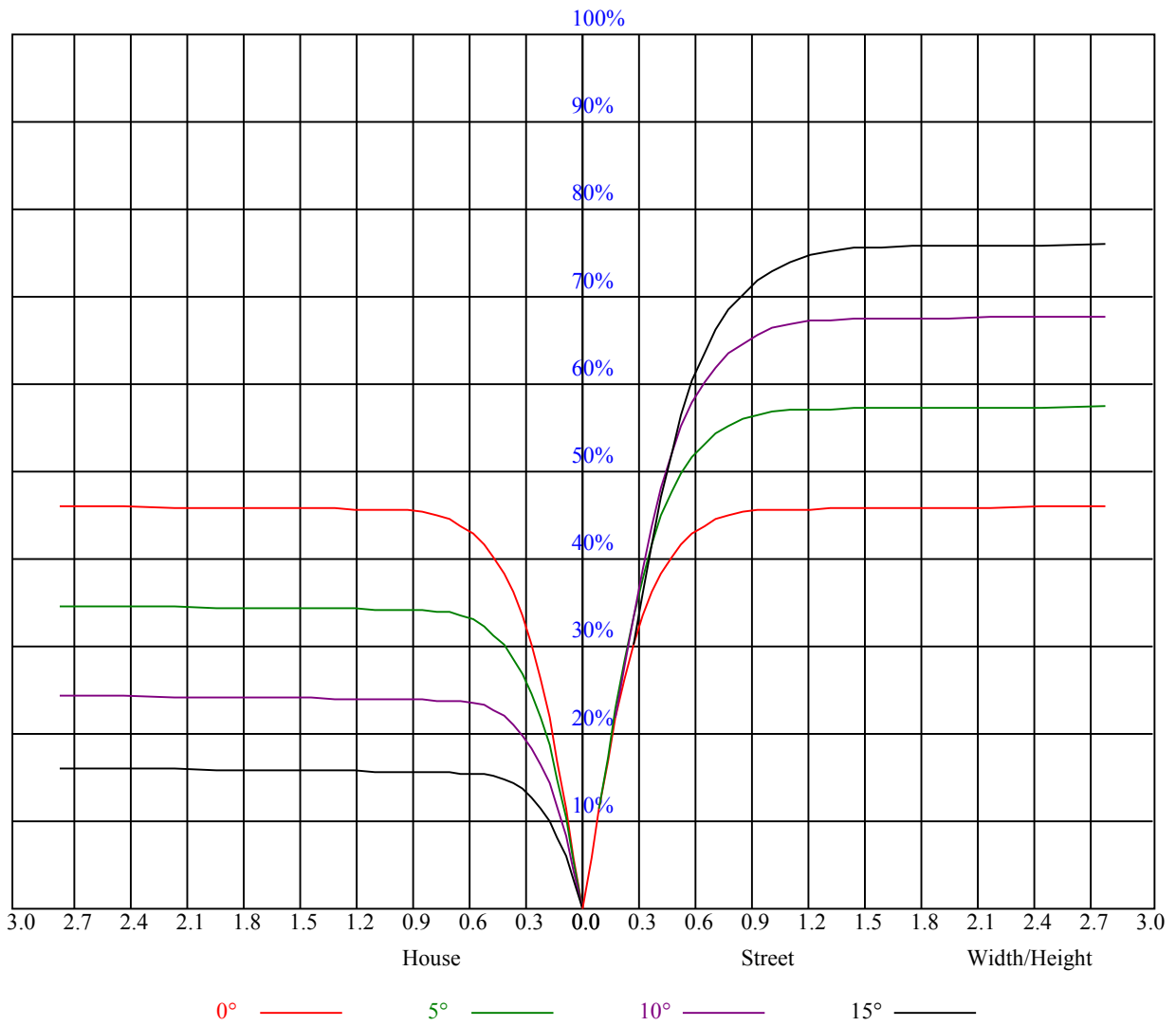
Luminance Limiting Curve



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	1.11	2.02	1.47	2.33	2.65	1.10	2.01	1.46	2.33	2.64
	3H	3.38	4.19	3.77	4.53	4.90	3.35	4.16	3.73	4.49	4.86
	4H	4.61	5.36	5.02	5.72	6.11	4.58	5.33	4.99	5.69	6.08
	6H	5.91	6.59	6.33	6.97	7.37	5.88	6.57	6.30	6.94	7.34
	8H	6.55	7.20	6.99	7.59	8.00	6.53	7.17	6.97	7.57	7.98
	12H	7.56	8.17	7.99	8.55	8.99	7.54	8.15	7.97	8.53	8.97
4H	2H	1.59	2.34	2.00	2.70	3.09	1.59	2.34	1.99	2.69	3.08
	3H	4.17	4.78	4.59	5.19	5.60	4.14	4.75	4.55	5.16	5.57
	4H	5.57	6.12	6.01	6.54	6.99	5.55	6.10	5.99	6.52	6.97
	6H	6.96	7.43	7.43	7.88	8.36	6.94	7.41	7.41	7.86	8.34
	8H	7.72	8.16	8.20	8.61	9.09	7.70	8.14	8.18	8.59	9.07
	12H	8.72	9.09	9.21	9.58	10.06	8.70	9.08	9.19	9.57	10.05
8H	4H	6.00	6.44	6.48	6.89	7.37	5.98	6.42	6.46	6.87	7.35
	6H	7.63	7.98	8.14	8.48	8.97	7.61	7.96	8.13	8.46	8.95
	8H	8.54	8.85	9.08	9.37	9.87	8.53	8.83	9.06	9.36	9.86
	12H	9.68	9.94	10.20	10.44	11.02	9.66	9.92	10.19	10.42	11.01
12H	4H	6.09	6.47	6.58	6.96	7.43	6.07	6.45	6.56	6.94	7.42
	6H	8.00	8.11	8.34	8.58	9.13	7.99	8.09	8.32	8.56	9.11
	8H	8.81	9.07	9.33	9.57	10.15	8.80	9.06	9.32	9.56	10.14
Variation with the observer position at spacings:											
S = 1.0H	5.2/-8.5					5.2/-8.5					
S = 1.5H	7.6/-6.7					7.6/-6.7					
S = 2.0H	9.3/-5.5					9.3/-5.5					
Standard tables:	BK1					BK1					
Uncorrected UGR	-1.5					-1.5					



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	1.11	1.11	1.11	1.09	1.09	1.09	1.04	1.04	1.04	0.99	0.99	0.99	0.95	0.95	0.95	0.93
1	1.03	1.00	0.98	1.01	0.99	0.97	0.97	0.95	0.94	0.94	0.92	0.91	0.90	0.89	0.88	0.87
2	0.97	0.94	0.91	0.96	0.92	0.90	0.93	0.90	0.88	0.90	0.88	0.86	0.87	0.86	0.84	0.83
3	0.92	0.88	0.85	0.91	0.87	0.84	0.89	0.85	0.83	0.86	0.84	0.81	0.84	0.82	0.80	0.79
4	0.88	0.83	0.80	0.87	0.83	0.79	0.85	0.81	0.79	0.83	0.80	0.78	0.81	0.79	0.77	0.76
5	0.84	0.79	0.76	0.83	0.79	0.76	0.81	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.72
6	0.80	0.76	0.72	0.80	0.75	0.72	0.78	0.74	0.72	0.77	0.74	0.71	0.76	0.73	0.71	0.70
7	0.77	0.72	0.69	0.77	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.67
8	0.74	0.70	0.66	0.74	0.69	0.66	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.64
9	0.71	0.67	0.64	0.71	0.67	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.69	0.66	0.63	0.62
10	0.69	0.65	0.62	0.69	0.64	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.67	0.63	0.61	0.60



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	5537.57	5203.38	4505.27	3511.50	2212.72	1272.90	906.23	643.06	294.55
45.0	5532.07	5220.45	4531.14	3502.69	2197.30	1269.60	917.24	631.50	287.94
90.0	5551.34	5099.87	4338.99	3255.48	1959.46	1083.79	870.72	552.05	129.38
135.0	5541.43	5219.35	4495.36	3437.17	2285.94	1278.96	904.58	599.01	285.74
180.0	5537.57	5104.28	4297.15	3156.38	1937.99	1087.53	846.77	513.90	102.68
225.0	5532.07	5044.27	4286.14	3139.32	1891.74	1088.47	856.29	504.54	103.34
270.0	5551.34	5153.28	4441.95	3399.18	2060.76	1240.42	900.17	606.17	295.65
315.0	5541.43	5060.23	4263.57	3154.73	1908.81	1081.91	858.71	532.84	110.55
360.0	5537.57	5203.38	4505.27	3511.50	2212.72	1272.90	906.23	643.06	294.55

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	26.98	13.16	12.06	11.51	11.12	10.85	10.63	10.52	10.41
45.0	27.20	12.99	12.00	11.45	11.12	10.85	10.68	10.57	10.41
90.0	24.89	12.66	11.84	11.34	10.96	10.79	10.63	10.52	10.41
135.0	27.31	12.77	11.95	11.45	11.07	10.85	10.68	10.52	10.46
180.0	19.82	12.61	11.89	11.34	11.01	10.74	10.57	10.46	10.35
225.0	18.17	12.61	11.89	11.40	11.01	10.79	10.63	10.52	10.41
270.0	20.65	12.99	12.06	11.56	11.12	10.90	10.63	10.52	10.41
315.0	19.55	12.83	11.95	11.45	11.07	10.85	10.63	10.46	10.35
360.0	26.98	13.16	12.06	11.51	11.12	10.85	10.63	10.52	10.41

C/γ(°)	90.0
0.0	10.30
45.0	10.30
90.0	10.30
135.0	10.30
180.0	10.30
225.0	10.35
270.0	10.30
315.0	10.30
360.0	10.30