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Nata

LumCAT: 1-1063-N	
Luminaire: 92.361.000	
Report No: 220518-B003	Voltage(V): 36.3200
Test No: 220518-C003	Current(A): 0.3610
LampCAT: CREE CXA1520	Power (W): 13.1150
Lamp flux(lm): 1029.7	PF: 1.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 43	Width(mm): 43
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 836.88
Efficiency(%): 81.27%
Lumens(lm)/Power(W): 63.81
Central intensity(cd): 1595.552
Maximum intensity(cd): 1595.552
Angle of maximum intensity: $C=0.0 \gamma=0.0$
Beam Angle(50%Imax): [C0/180]Total=43.4
[C90/270]Total=43.4
Field angle(10%Imax): [C0/180]Total=64.8
[C90/270]Total=64.8
Maximum s/h(1/2): C0_180=0.70 C90_270=0.70
Maximum s/h(1/4): C0_180=0.67 C90_270=0.67
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 81.27%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 97.821%

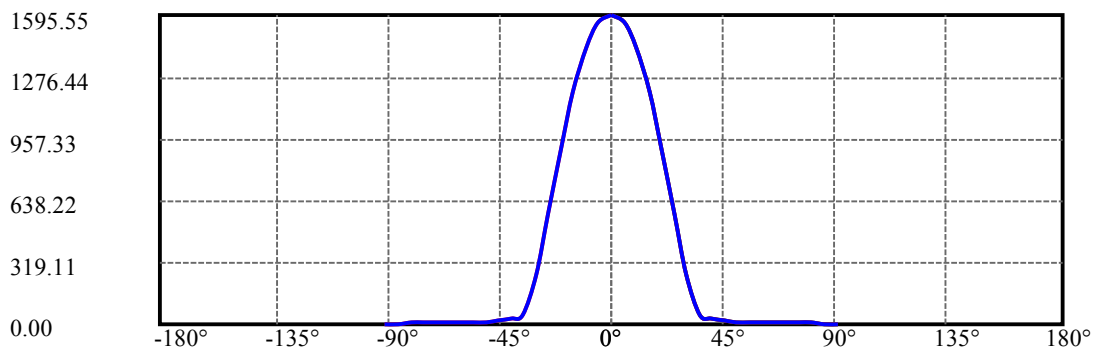
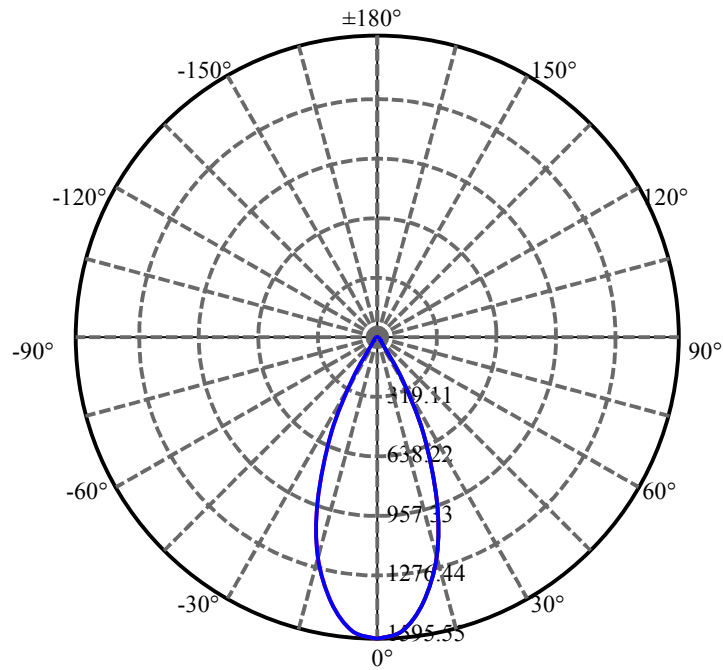
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	1595.552	0.000	0	.000%	.000%
5.0	1556.264	37.679	37.679	3.659%	4.502%
10.0	1427.497	106.739	144.418	10.366%	17.257%
15.0	1200.996	155.920	300.338	15.142%	35.888%
20.0	915.579	174.435	474.773	16.940%	56.731%
25.0	566.039	155.394	630.168	15.091%	75.300%
30.0	257.923	104.273	734.441	10.126%	87.759%
35.0	54.069	45.943	780.384	4.462%	93.249%
40.0	25.641	13.299	793.683	1.292%	94.838%
45.0	18.202	8.118	801.801	.788%	95.808%
50.0	14.288	6.565	808.366	.638%	96.593%
55.0	11.271	5.557	813.924	.540%	97.257%
60.0	9.150	4.720	818.644	.458%	97.821%
65.0	7.484	4.044	822.688	.393%	98.304%
70.0	6.528	3.548	826.236	.345%	98.728%
75.0	5.781	3.217	829.453	.312%	99.112%
80.0	5.027	2.892	832.345	.281%	99.458%
85.0	4.033	2.462	834.807	.239%	99.752%
90.0	3.540	2.074	836.88	.201%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	734.44	71.32%	87.76%
0-40	793.68	77.08%	94.84%
0-60	818.64	79.50%	97.82%
0-90	834.81	81.07%	99.75%
0-120	834.81	81.07%	99.75%
0-180	836.88	81.27%	100.00%
60-90	20.88	2.03%	2.50%
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%
0-26.89	669.50	65.02%	80.00%

ZONAL LUMEN SUMMARY

0-10	144.42
10-20	330.36
20-30	259.67
30-40	59.24
40-50	14.68
50-60	10.28
60-70	7.59
70-80	6.11
80-90	2.46
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



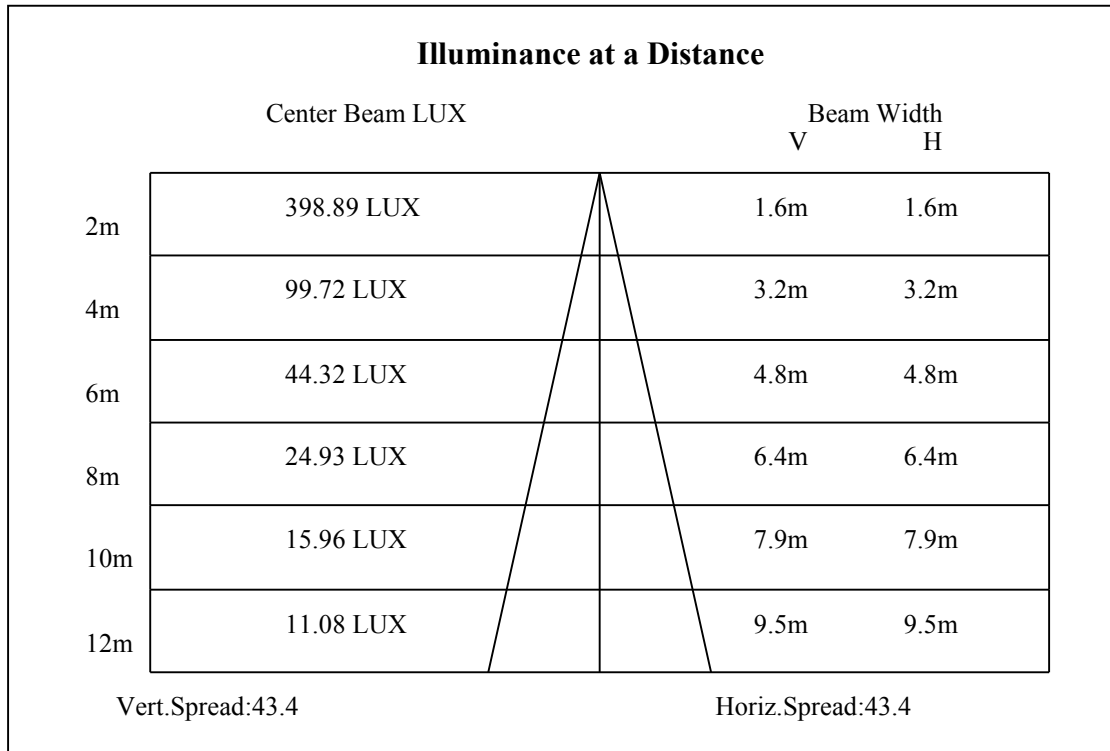
C0(Max): —————

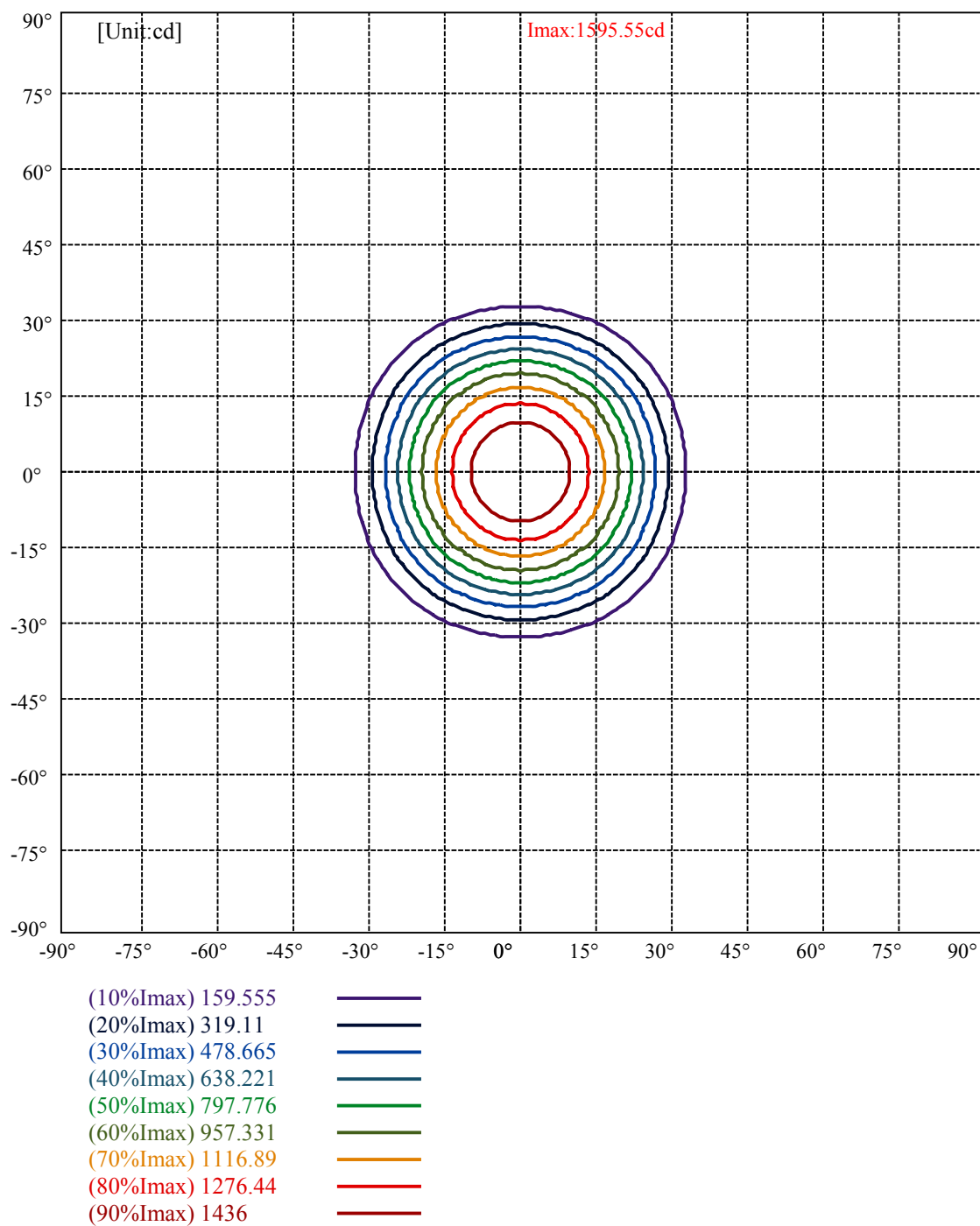
C0/C180: —————

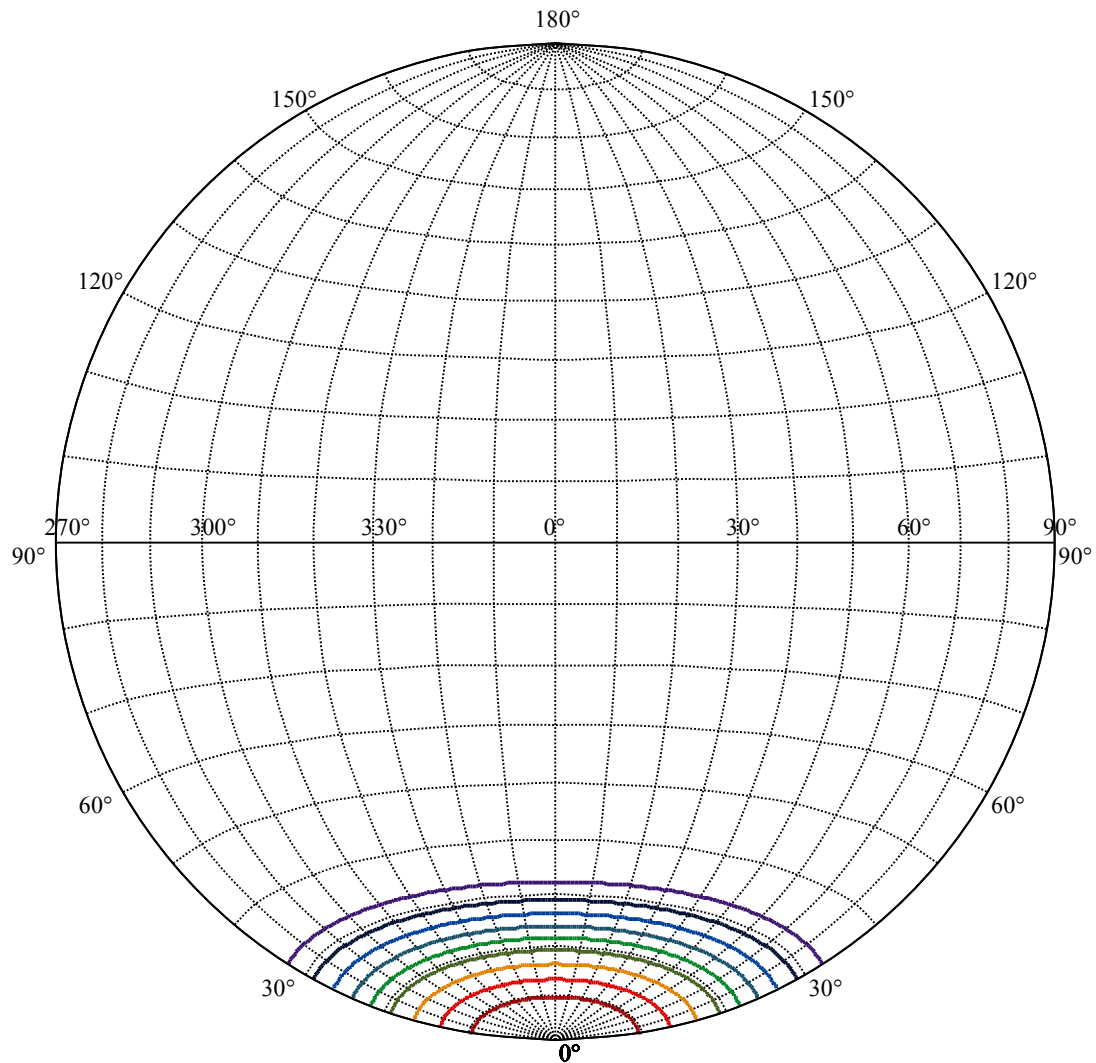
C90/C270: —————

Field angle(10%Imax):C0/180Left:32.4 Right:32.4
:C90/270Left:32.4 Right:32.4

Beam Angle(50%Imax):C0/180Left:21.7 Right:21.7
:C90/270Left:21.7 Right:21.7







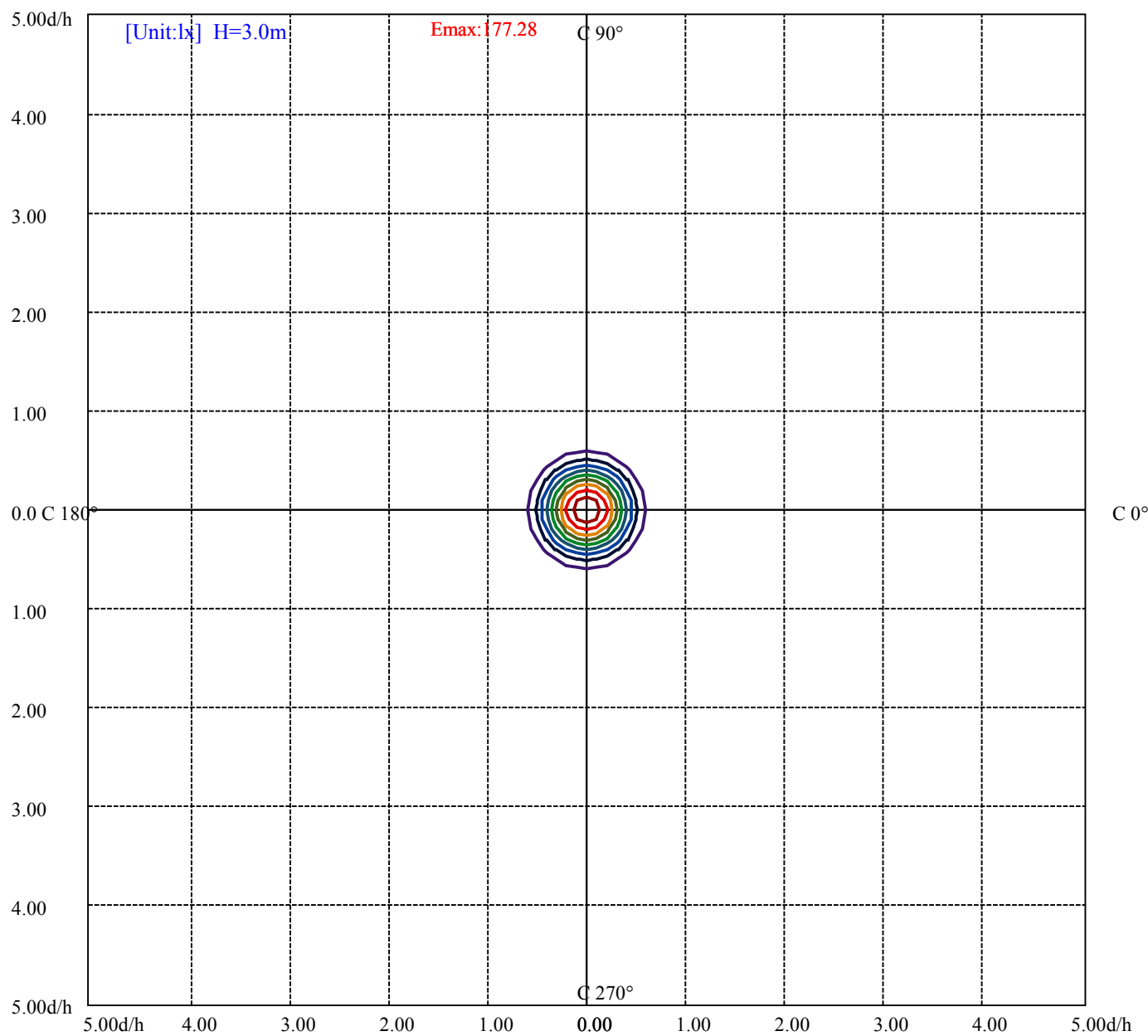
House

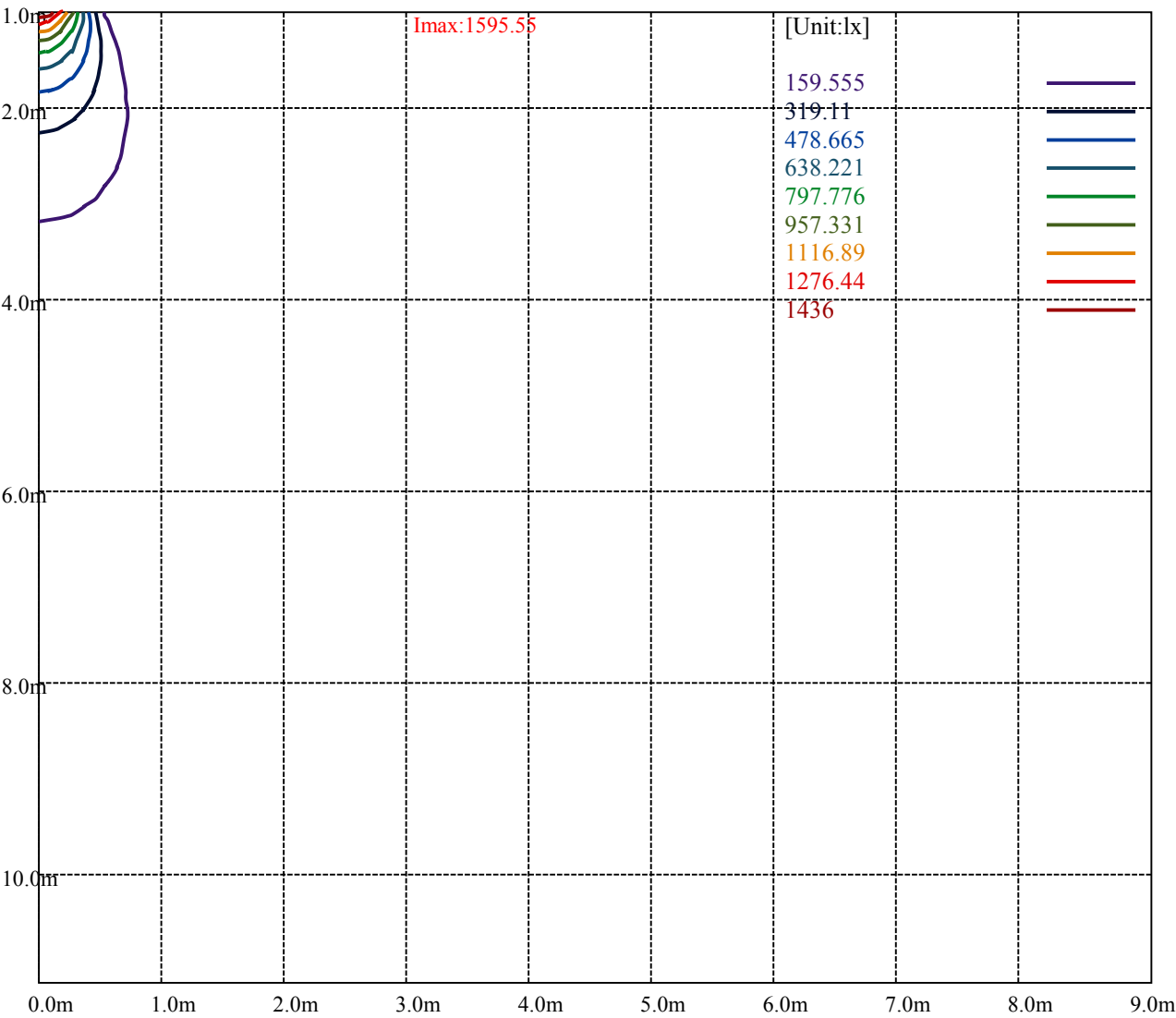
[Unit:cd]

Road

Imax:1595.55

(10%Imax)	159.555	—
(20%Imax)	319.11	—
(30%Imax)	478.665	—
(40%Imax)	638.221	—
(50%Imax)	797.776	—
(60%Imax)	957.331	—
(70%Imax)	1116.89	—
(80%Imax)	1276.44	—
(90%Imax)	1436	—





Luminance Table

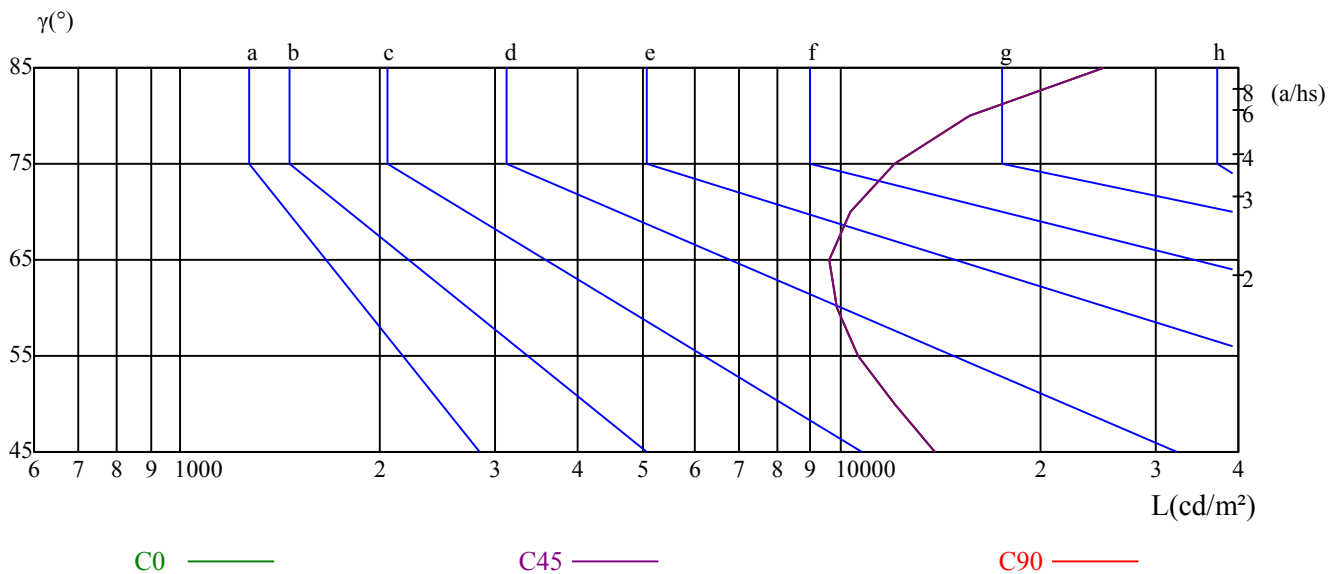
γ	45	50	55	60	65	70	75	80	85
C0	13922	12022	10627	9897	9577	10323	12080	15656	25028
C45	13922	12022	10627	9897	9577	10323	12080	15656	25028
C90	13922	12022	10627	9897	9577	10323	12080	15656	25028

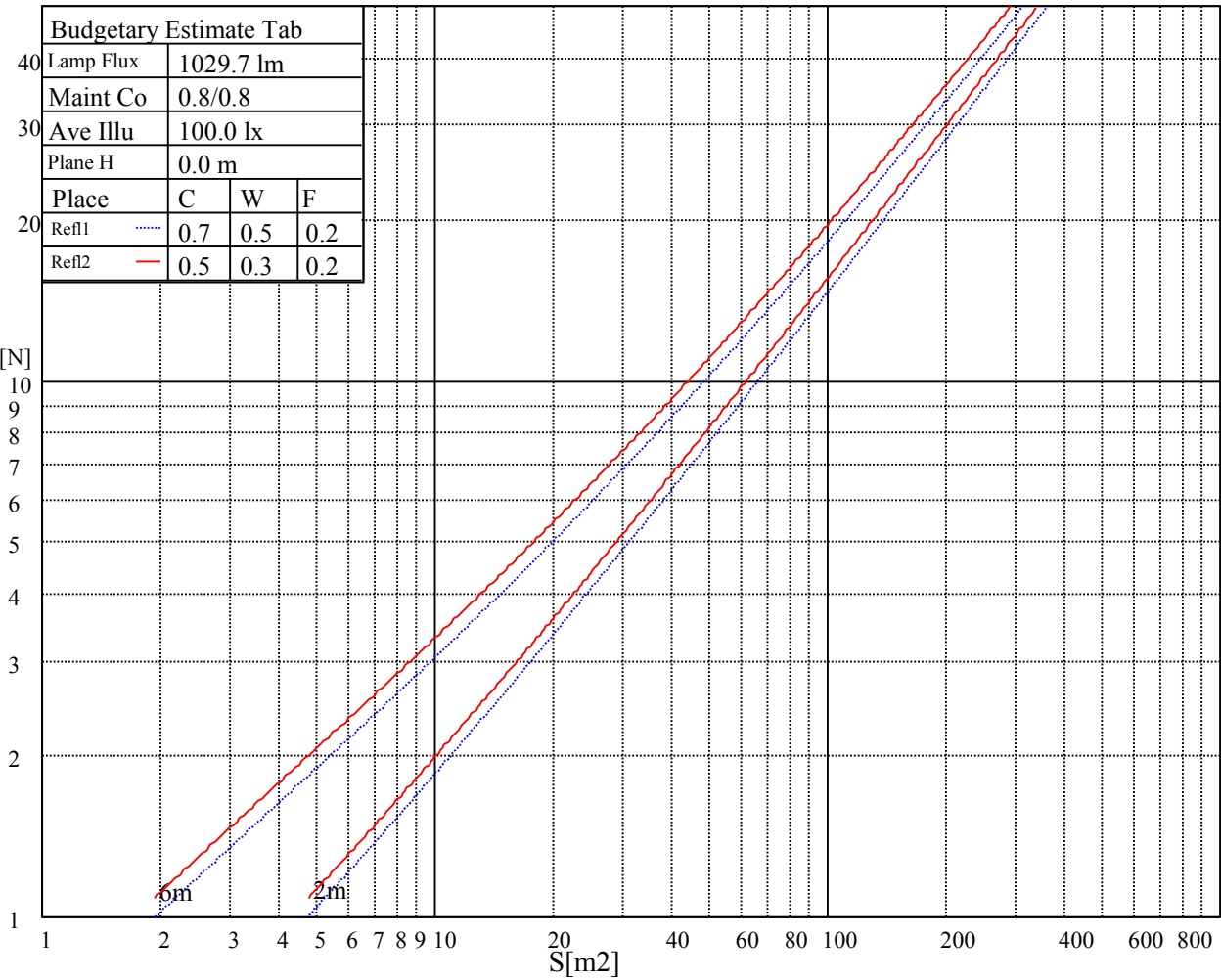
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9577	9577	9577	12080	12080	12080	25028	25028	25028

Glare Table

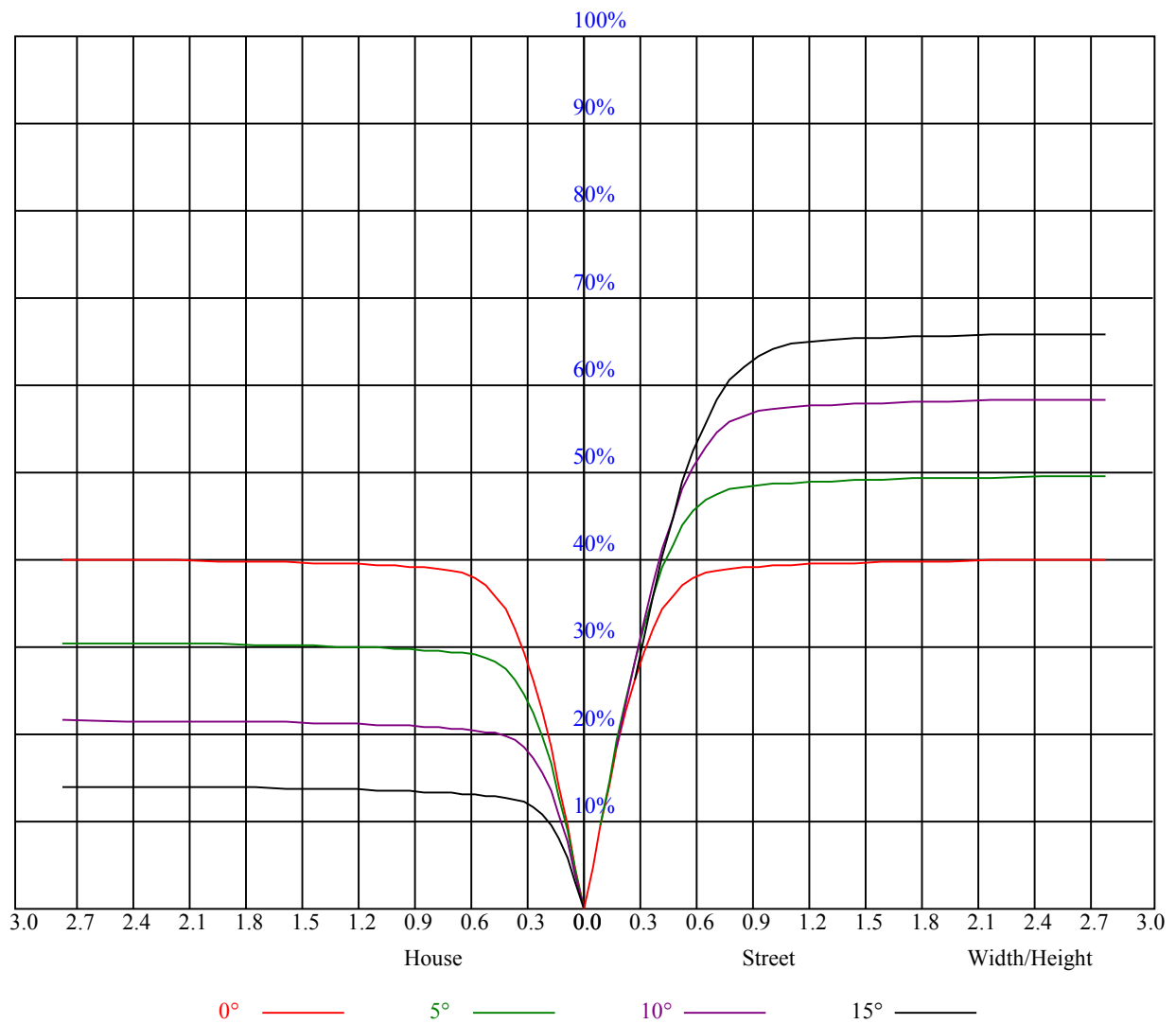
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

Luminance Limiting Curve





RHOC	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	0.97	0.97	0.97	0.95	0.95	0.95	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.81
1	0.90	0.88	0.87	0.89	0.87	0.85	0.85	0.84	0.83	0.82	0.81	0.80	0.80	0.79	0.78	0.77
2	0.85	0.82	0.79	0.83	0.81	0.78	0.81	0.79	0.77	0.78	0.77	0.75	0.76	0.75	0.74	0.72
3	0.80	0.76	0.73	0.79	0.76	0.73	0.77	0.74	0.72	0.75	0.73	0.71	0.73	0.71	0.70	0.68
4	0.76	0.72	0.69	0.75	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.65
5	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.66	0.64	0.68	0.66	0.63	0.67	0.65	0.63	0.62
6	0.68	0.64	0.61	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.62	0.60	0.65	0.62	0.60	0.59
7	0.65	0.61	0.58	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
8	0.62	0.58	0.55	0.62	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.54	0.53
9	0.60	0.55	0.53	0.59	0.55	0.53	0.59	0.55	0.52	0.58	0.55	0.52	0.57	0.54	0.52	0.51
10	0.57	0.53	0.50	0.57	0.53	0.50	0.56	0.53	0.50	0.56	0.52	0.50	0.55	0.52	0.50	0.49



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Intensity data(cd)										Appendix Page: 14 Total:14	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	1590.62	1593.01	1520.71	1339.66	1085.71	761.85	423.05	89.63	31.43		
45.0	1601.98	1560.15	1431.08	1208.80	910.04	561.68	316.09	40.75	23.60		
90.0	1592.41	1518.92	1336.07	1070.05	752.05	397.06	86.40	28.80	20.32		
135.0	1597.20	1523.70	1359.98	1097.06	764.84	412.89	104.21	31.67	20.91		
180.0	1590.62	1509.96	1313.37	1061.57	725.76	342.26	83.77	30.53	20.73		
225.0	1601.98	1566.12	1444.83	1184.36	950.55	591.14	228.61	48.94	26.11		
270.0	1592.41	1588.83	1510.55	1335.48	1086.31	742.73	436.20	87.72	32.27		
315.0	1597.20	1589.43	1503.38	1310.98	1049.38	718.71	385.05	74.51	29.76		
360.0	1590.62	1593.01	1520.71	1339.66	1085.71	761.85	423.05	89.63	31.43		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	20.73	15.95	12.61	10.28	8.25	6.99	6.21	5.62	4.54		
45.0	17.27	13.86	10.93	8.84	7.23	6.33	5.62	4.78	3.76		
90.0	15.48	12.49	9.98	8.13	6.81	6.15	5.44	4.48	3.64		
135.0	15.89	12.79	10.10	8.31	6.93	6.15	5.50	4.54	3.64		
180.0	15.89	12.67	10.04	8.31	6.99	6.33	5.38	4.60	3.76		
225.0	18.52	14.64	11.53	9.20	7.47	6.57	5.86	5.02	4.06		
270.0	21.51	16.25	12.61	10.10	8.13	6.81	6.09	5.56	4.36		
315.0	20.32	15.66	12.37	10.04	8.07	6.87	6.15	5.62	4.48		
360.0	20.73	15.95	12.61	10.28	8.25	6.99	6.21	5.62	4.54		
C/γ(°)	90.0										
0.0	3.70										
45.0	3.47										
90.0	3.47										
135.0	3.47										
180.0	3.53										
225.0	3.47										
270.0	3.59										
315.0	3.64										
360.0	3.70										