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Nata

LumCAT: 1-0918-M	
Luminaire: 92.70.124.00	
Report No: NATA0100	Voltage(V): 33.3500
Test No: GC2019092109	Current(A): 0.2470
LampCAT: BRIDGELUX V10B LES10	Power (W): 8.2400
Lamp flux(lm): 1244.0	PF: 0.0000
Number of Lamps: 1	Ballast type: DC
Length(mm): 0	Width(mm): 0
Phm Type: C	Height(mm): 0

Photometric Results

Lumens(lm): 932.55
Efficiency(%): 74.96%
Lumens(lm)/Power(W): 113.17
Central intensity(cd): 5975.437
Maximum intensity(cd): 5975.437
Angle of maximum intensity: C=0.0 γ =0.0
Beam Angle(50%Imax): [C0/180]Total=20.0
[C90/270]Total=20.0
Field angle(10%Imax): [C0/180]Total=40.3
[C90/270]Total=40.3
Maximum s/h(1/2): C0_180=0.34 C90_270=0.34
Maximum s/h(1/4): C0_180=0.36 C90_270=0.36
Up flux rate of lamp(%): 0.00%
Down flux rate of lamp(%): 74.96%
Up flux rate of LUM(%): - -
Down flux rate of LUM(%): 100.00%
CIE Type : Direct lighting
Output flux ratio in π solid angle : 98.519%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	5975.438	0.000	0	.000%	.000%
1.0	5947.875	5.705	5.705	.459%	.612%
2.0	5833.266	16.909	22.614	1.359%	2.425%
3.0	5648.977	27.462	50.076	2.208%	5.370%
4.0	5403.164	36.995	87.071	2.974%	9.337%
5.0	5052.234	44.979	132.05	3.616%	14.160%
6.0	4683.094	51.162	183.212	4.113%	19.646%
7.0	4254.680	55.477	238.688	4.460%	25.595%
8.0	3813.680	57.744	296.432	4.642%	31.787%
9.0	3380.695	58.306	354.738	4.687%	38.040%
10.0	2978.508	57.548	412.287	4.626%	44.211%
11.0	2606.203	55.803	468.09	4.486%	50.194%
12.0	2281.992	53.435	521.525	4.295%	55.924%
13.0	1981.969	50.602	572.127	4.068%	61.351%
14.0	1693.125	47.041	619.168	3.781%	66.395%
15.0	1470.656	43.434	662.602	3.491%	71.052%
16.0	1226.447	39.520	702.122	3.177%	75.290%
17.0	1072.842	35.806	737.928	2.878%	79.130%
18.0	905.505	32.619	770.547	2.622%	82.628%
19.0	762.300	29.016	799.563	2.333%	85.739%
20.0	615.270	25.213	824.776	2.027%	88.443%
21.0	486.084	21.148	845.925	1.700%	90.711%
22.0	375.328	17.310	863.235	1.392%	92.567%
23.0	274.085	13.626	876.862	1.095%	94.028%
24.0	192.938	10.211	887.072	.821%	95.123%
25.0	110.447	6.898	893.971	.555%	95.863%
26.0	60.244	4.029	898	.324%	96.295%
27.0	29.559	2.197	900.197	.177%	96.530%
28.0	19.392	1.239	901.436	.100%	96.663%
29.0	16.038	0.927	902.363	.075%	96.763%
30.0	14.372	0.821	903.184	.066%	96.851%
31.0	13.106	0.765	903.949	.061%	96.933%
32.0	11.925	0.717	904.666	.058%	97.010%
33.0	10.997	0.675	905.341	.054%	97.082%
34.0	10.245	0.643	905.984	.052%	97.151%
35.0	9.584	0.616	906.6	.050%	97.217%
36.0	8.930	0.589	907.189	.047%	97.280%
37.0	8.480	0.568	907.757	.046%	97.341%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	8.030	0.551	908.308	.044%	97.400%
39.0	7.629	0.534	908.843	.043%	97.458%
40.0	7.327	0.522	909.364	.042%	97.513%
41.0	7.038	0.512	909.876	.041%	97.568%
42.0	6.778	0.502	910.378	.040%	97.622%
43.0	6.532	0.493	910.871	.040%	97.675%
44.0	6.342	0.486	911.357	.039%	97.727%
45.0	6.159	0.480	911.837	.039%	97.779%
46.0	6.005	0.476	912.313	.038%	97.830%
47.0	5.857	0.472	912.785	.038%	97.880%
48.0	5.723	0.468	913.253	.038%	97.930%
49.0	5.597	0.465	913.718	.037%	97.980%
50.0	5.484	0.462	914.18	.037%	98.030%
51.0	5.386	0.460	914.64	.037%	98.079%
52.0	5.302	0.459	915.098	.037%	98.128%
53.0	5.210	0.457	915.555	.037%	98.177%
54.0	5.133	0.456	916.011	.037%	98.226%
55.0	5.063	0.455	916.466	.037%	98.275%
56.0	4.999	0.455	916.921	.037%	98.324%
57.0	4.950	0.455	917.376	.037%	98.373%
58.0	4.894	0.455	917.831	.037%	98.421%
59.0	4.838	0.455	918.286	.037%	98.470%
60.0	4.781	0.454	918.741	.037%	98.519%
61.0	4.746	0.455	919.195	.037%	98.568%
62.0	4.697	0.455	919.65	.037%	98.616%
63.0	4.648	0.454	920.105	.037%	98.665%
64.0	4.627	0.455	920.56	.037%	98.714%
65.0	4.584	0.456	921.016	.037%	98.763%
66.0	4.549	0.456	921.471	.037%	98.812%
67.0	4.528	0.456	921.928	.037%	98.861%
68.0	4.507	0.458	922.385	.037%	98.910%
69.0	4.486	0.459	922.844	.037%	98.959%
70.0	4.430	0.458	923.302	.037%	99.008%
71.0	4.423	0.458	923.76	.037%	99.057%
72.0	4.402	0.459	924.219	.037%	99.106%
73.0	4.388	0.460	924.678	.037%	99.156%
74.0	4.373	0.461	925.139	.037%	99.205%
75.0	4.338	0.460	925.599	.037%	99.254%

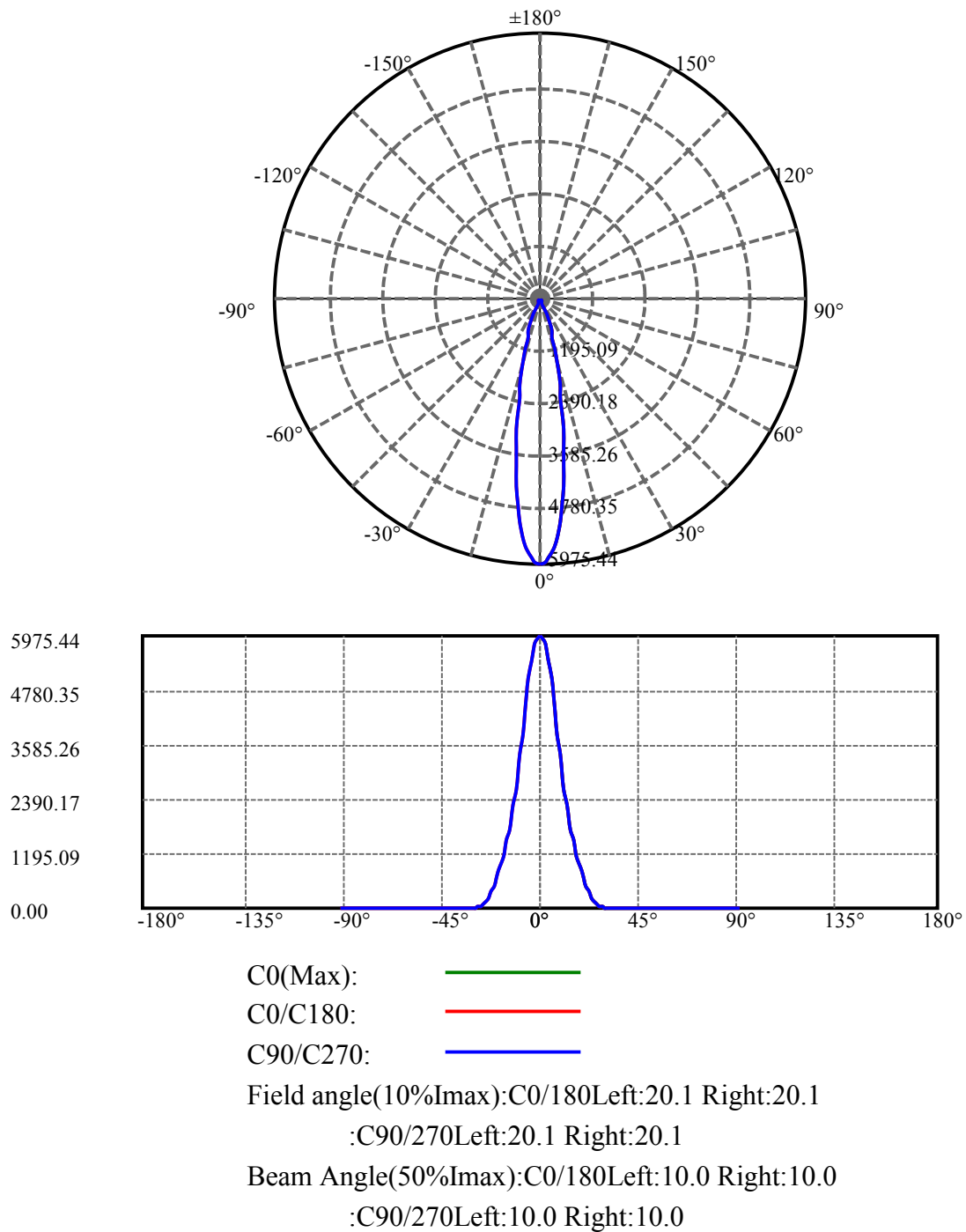
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	4.331	0.460	926.059	.037%	99.304%
77.0	4.317	0.461	926.52	.037%	99.353%
78.0	4.317	0.462	926.983	.037%	99.403%
79.0	4.296	0.463	927.445	.037%	99.452%
80.0	4.282	0.462	927.908	.037%	99.502%
81.0	4.275	0.463	928.371	.037%	99.552%
82.0	4.275	0.464	928.834	.037%	99.601%
83.0	4.282	0.465	929.299	.037%	99.651%
84.0	4.282	0.467	929.766	.038%	99.701%
85.0	4.268	0.467	930.233	.038%	99.751%
86.0	4.233	0.465	930.697	.037%	99.801%
87.0	4.247	0.464	931.161	.037%	99.851%
88.0	4.226	0.464	931.625	.037%	99.901%
89.0	4.233	0.464	932.089	.037%	99.950%
90.0	4.219	0.463	932.552	.037%	100.000%

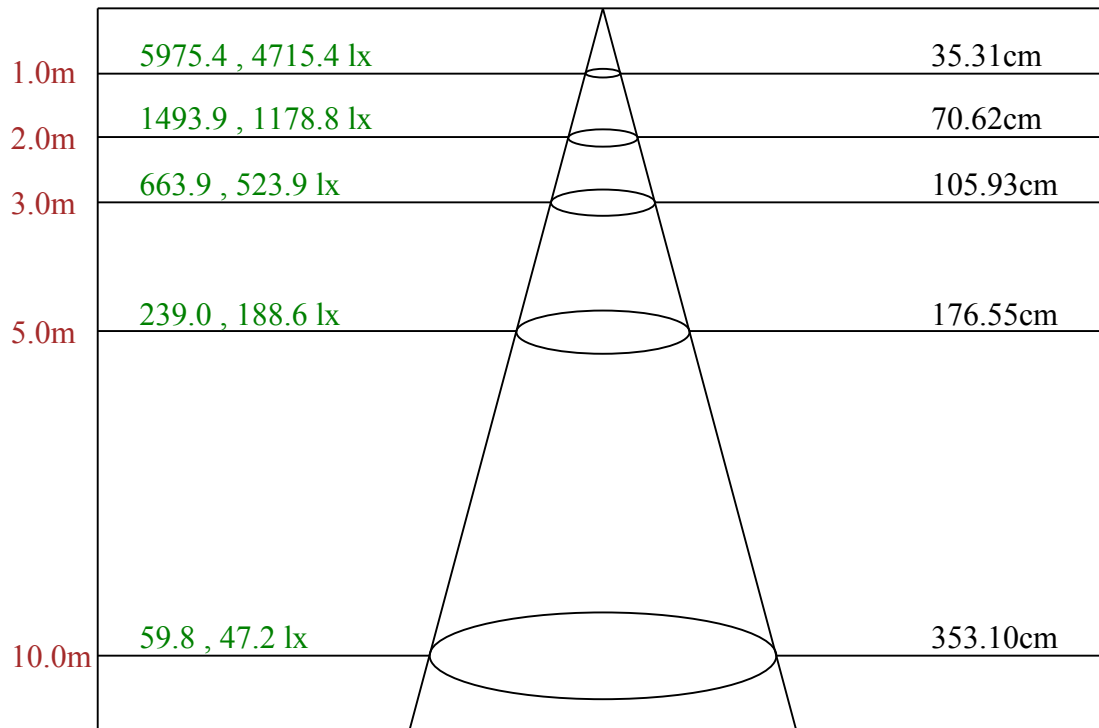
ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	903.18	72.60%	96.85%
0-40	909.36	73.10%	97.51%
0-60	918.74	73.85%	98.52%
0-90	932.09	74.93%	99.95%
0-120	932.09	74.93%	99.95%
0-180	932.55	74.96%	100.00%
60-90	13.80	1.11%	1.48%
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%
0-17.25	746.04	59.97%	80.00%

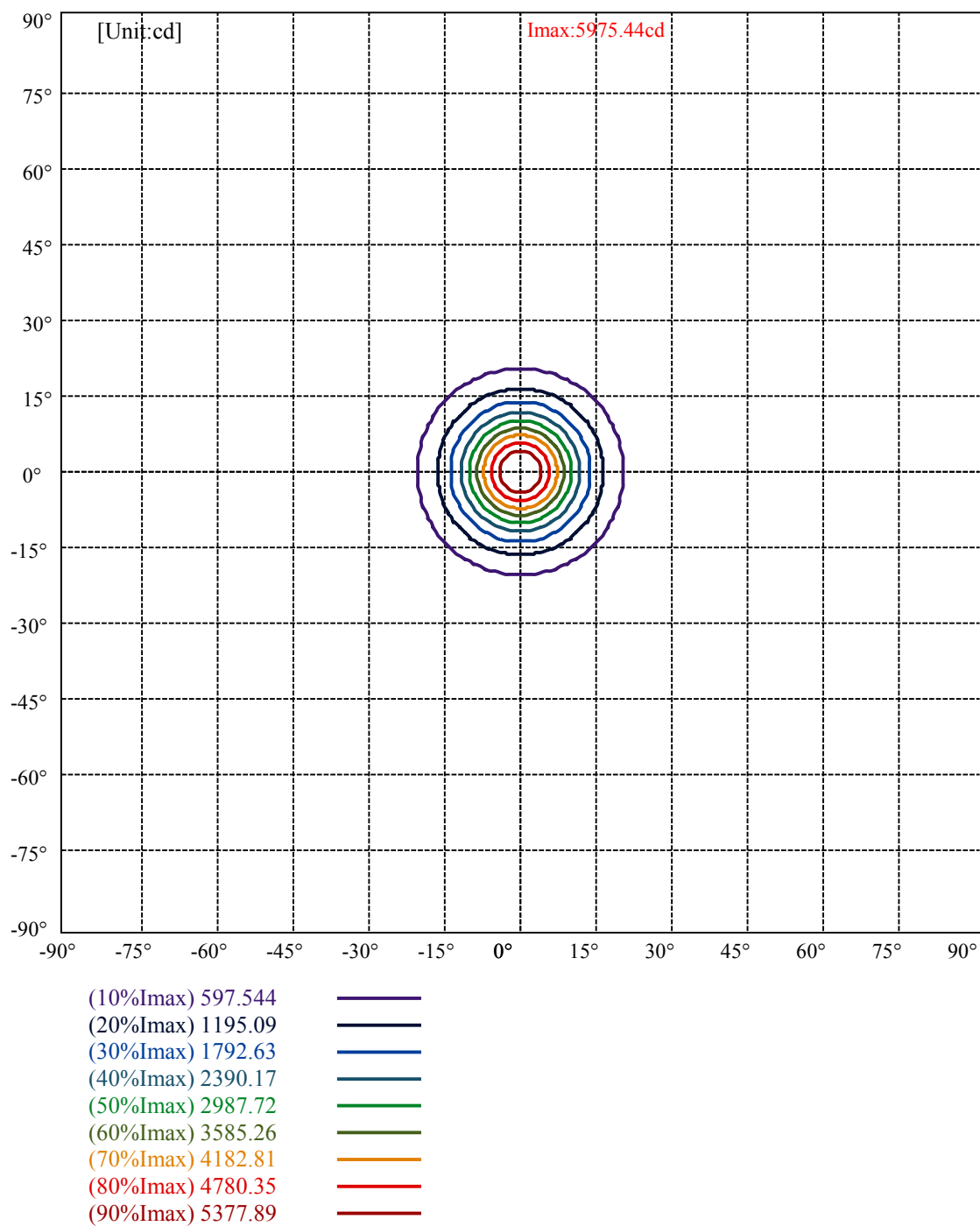
ZONAL LUMEN SUMMARY

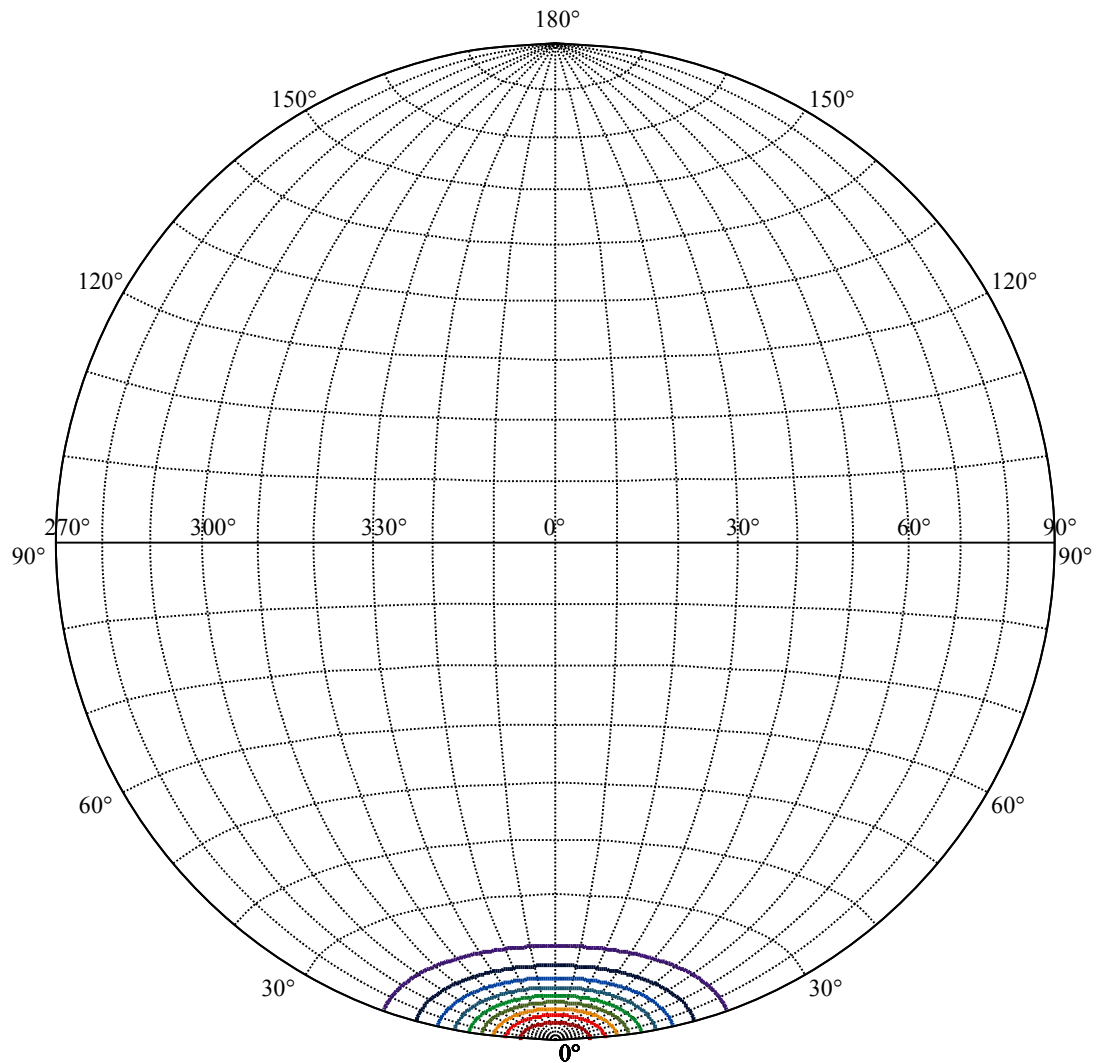
0-10	412.29
10-20	412.49
20-30	78.41
30-40	6.18
40-50	4.82
50-60	4.56
60-70	4.56
70-80	4.61
80-90	4.18
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00





Max , Ave Beam angle of C0 plane 20.02





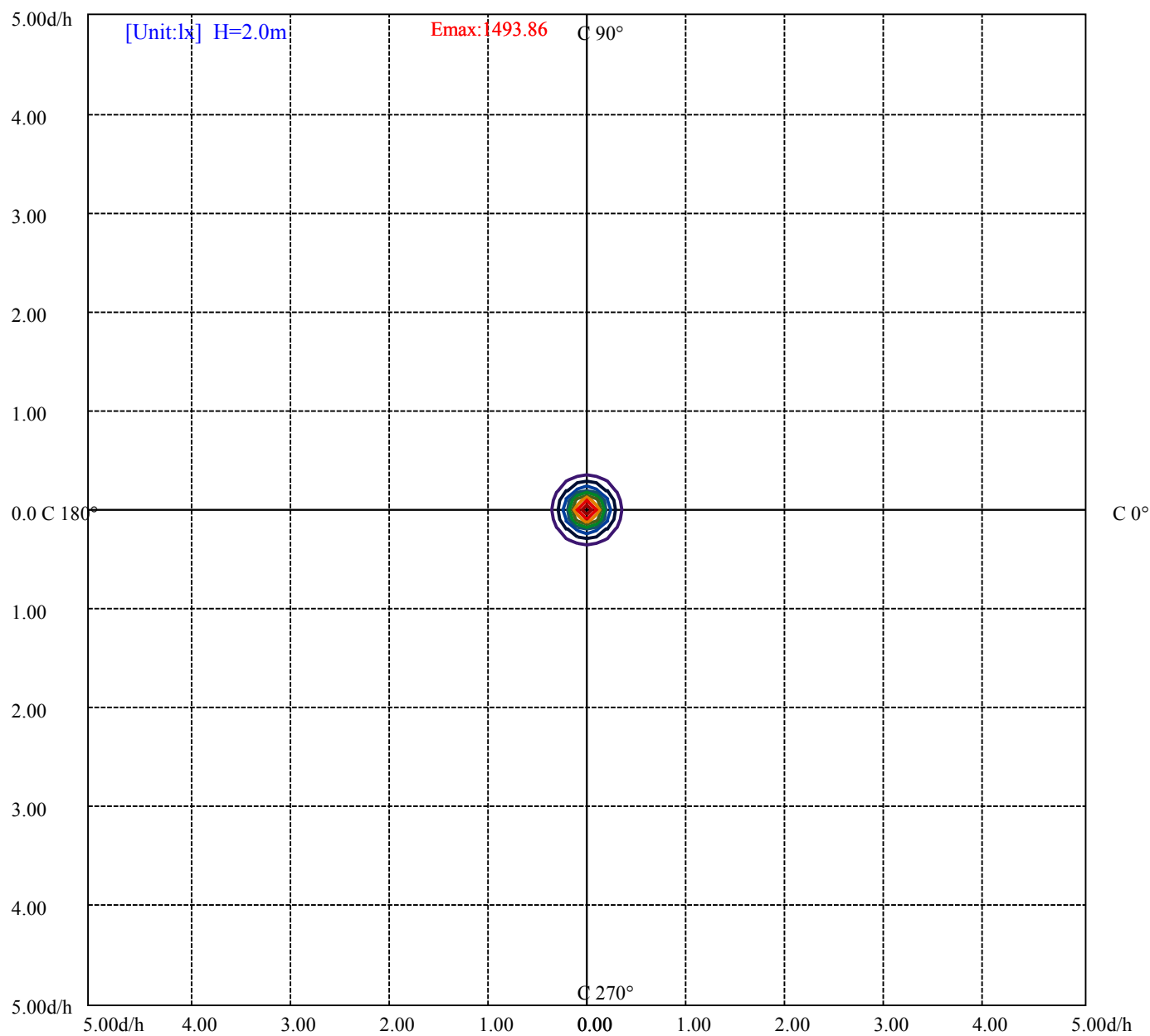
House

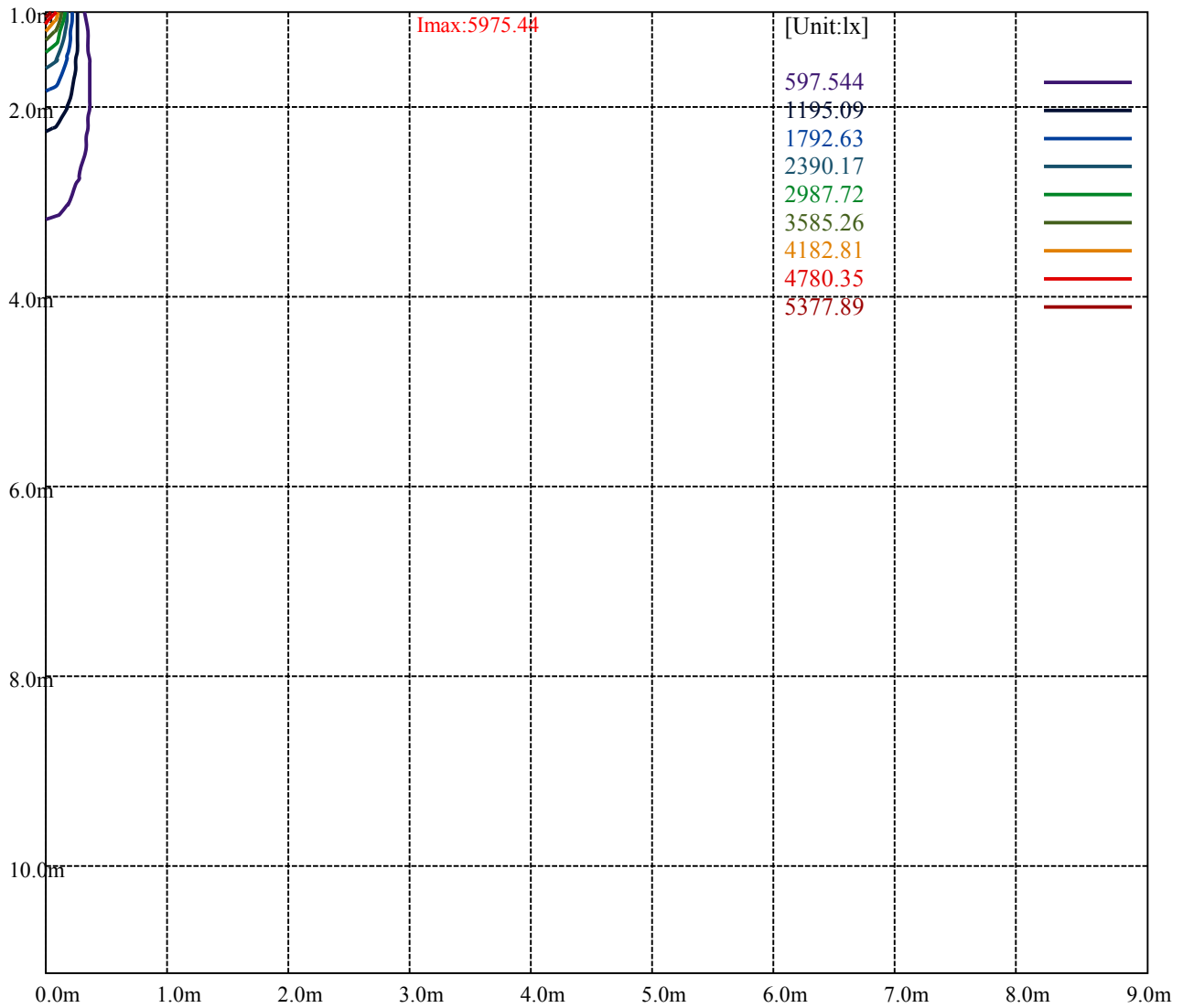
[Unit:cd]

Road

Imax:5975.44

(10%Imax)	597.544	—
(20%Imax)	1195.09	—
(30%Imax)	1792.63	—
(40%Imax)	2390.17	—
(50%Imax)	2987.72	—
(60%Imax)	3585.26	—
(70%Imax)	4182.81	—
(80%Imax)	4780.35	—
(90%Imax)	5377.89	—





Luminance Table

γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

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

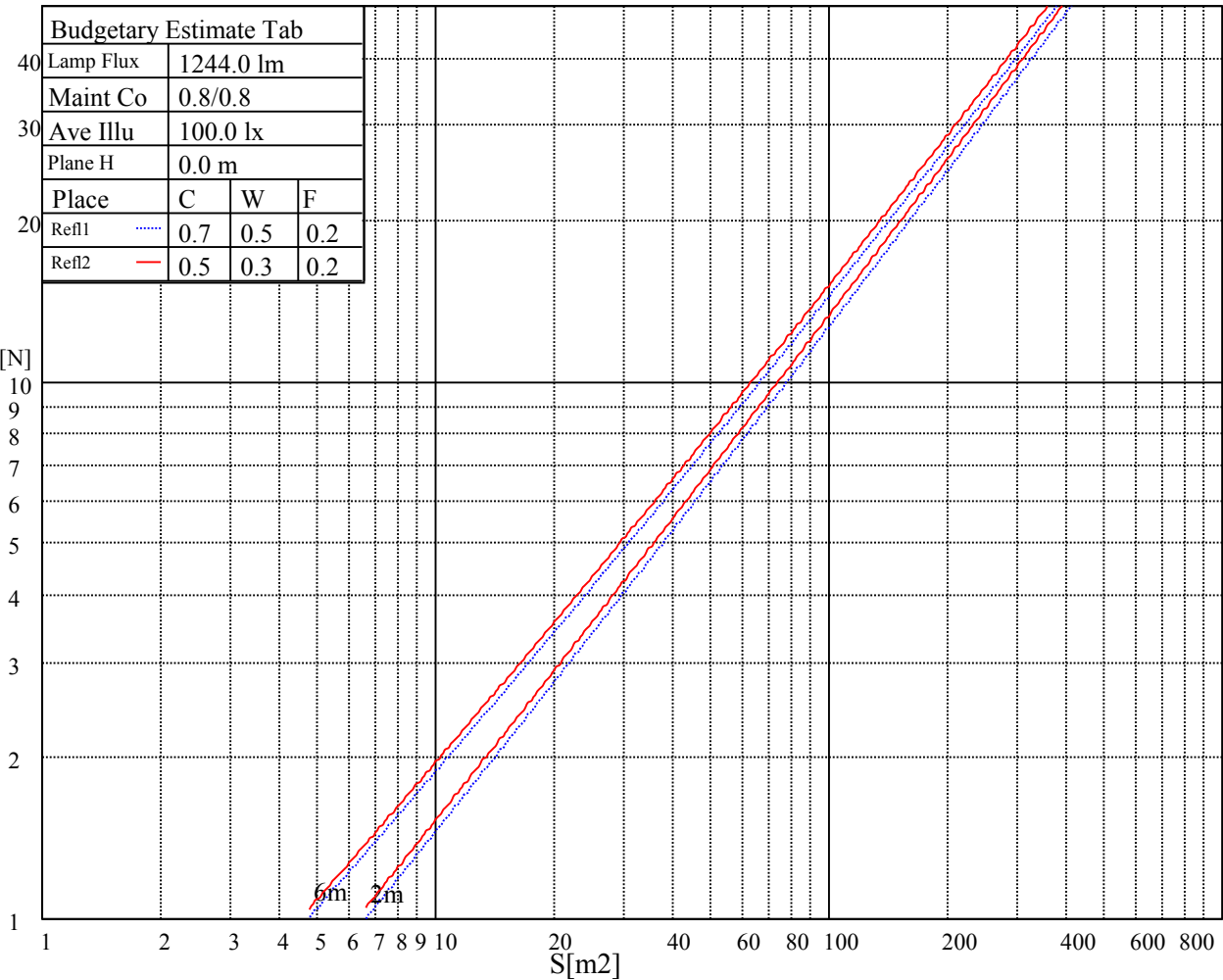
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

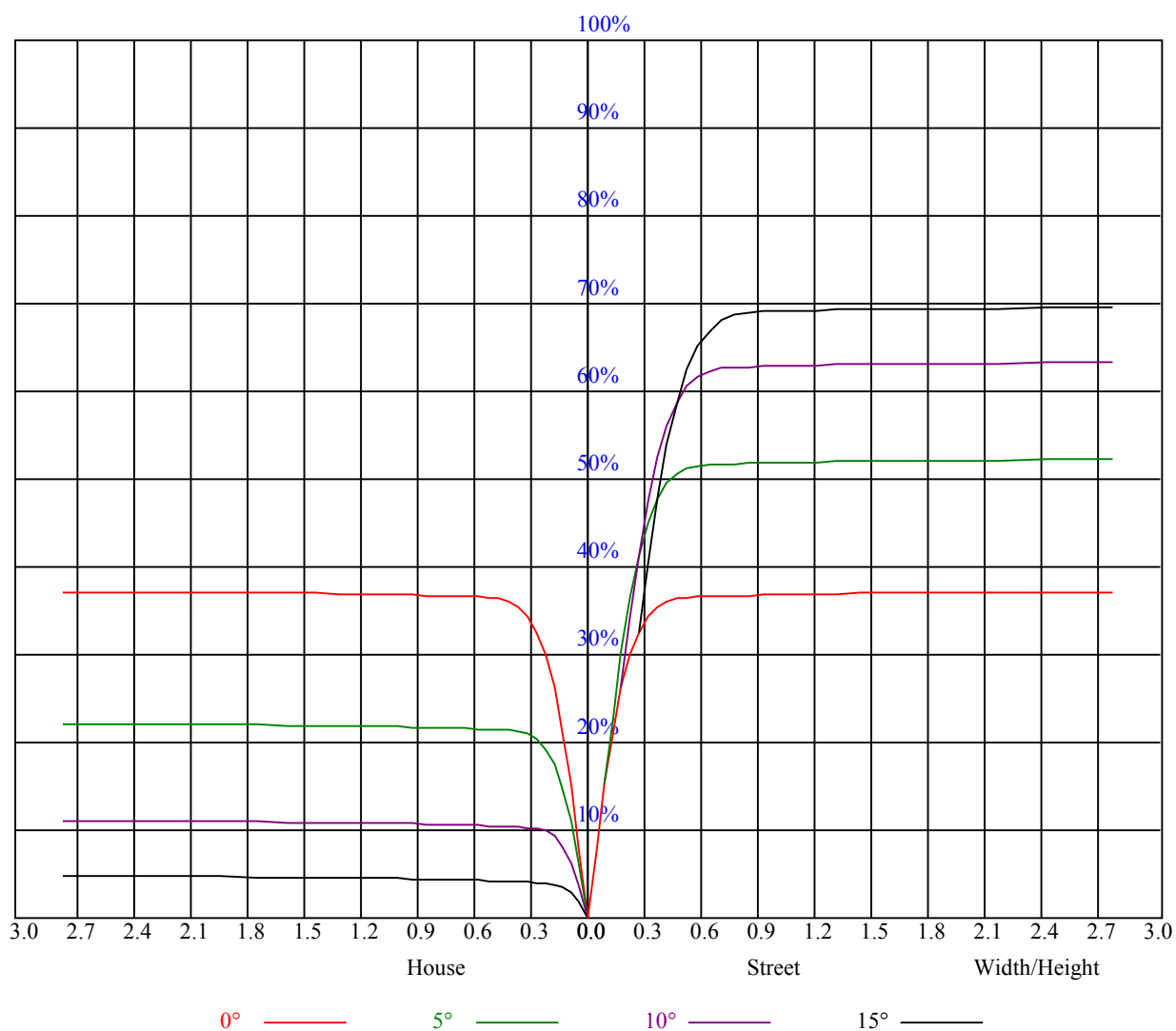
C0 ———

C45 ———

C90 ———



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



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Intensity data(cd)									
Appendix Page: 16 Total:18									
C/ γ (°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	5964.19	5952.38	5873.63	5722.31	5473.69	5147.44	4809.38	4393.69	3999.94
45.0	5987.25	5956.31	5829.19	5662.69	5426.44	5063.06	4728.94	4354.31	3920.06
90.0	5964.19	5887.69	5711.63	5465.25	5185.69	4816.69	4448.25	4001.63	3557.81
135.0	5986.13	5946.19	5804.44	5625.56	5374.69	4985.44	4623.19	4219.88	3755.25
180.0	5964.19	5922.56	5794.88	5558.63	5288.06	4953.38	4521.38	4043.81	3621.94
225.0	5987.25	5965.88	5849.44	5654.81	5405.06	5031.56	4661.44	4191.75	3717.00
270.0	5964.19	5990.63	5938.31	5816.25	5623.88	5275.13	4929.75	4538.81	4061.25
315.0	5986.13	5961.38	5864.63	5686.31	5447.81	5145.19	4742.44	4293.56	3876.19
360.0	5964.19	5952.38	5873.63	5722.31	5473.69	5147.44	4809.38	4393.69	3999.94
C/ γ (°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3563.44	3144.94	2790.56	2462.63	2094.19	1832.06	1598.06	1339.88	1158.19
45.0	3485.81	3120.19	2725.88	2398.50	2066.06	1773.00	1540.69	1315.13	1112.06
90.0	3179.25	2775.38	2409.75	2114.44	1849.50	1559.25	1353.94	1102.67	1000.13
135.0	3314.25	2945.25	2556.00	2243.25	1960.88	1654.31	1436.06	1243.13	1035.56
180.0	3169.69	2755.13	2426.63	2092.50	1829.25	1568.81	1341.00	1113.98	992.93
225.0	3313.69	2888.44	2501.44	2193.19	1918.69	1623.94	1409.63	1104.24	1007.38
270.0	3595.50	3202.31	2794.50	2462.06	2128.50	1830.38	1598.06	1363.50	1159.88
315.0	3423.94	2996.44	2644.88	2289.38	2008.69	1703.25	1487.81	1229.06	1116.62
360.0	3563.44	3144.94	2790.56	2462.63	2094.19	1832.06	1598.06	1339.88	1158.19
C/ γ (°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	996.75	831.38	681.19	558.56	429.19	323.44	285.75	148.05	76.67
45.0	951.19	801.56	632.25	511.31	398.81	293.63	182.31	115.48	71.78
90.0	813.32	678.94	553.28	409.67	307.74	218.81	136.97	77.40	40.22
135.0	882.56	739.69	585.00	466.88	359.44	285.19	156.60	95.68	49.16
180.0	811.18	679.73	556.82	414.39	311.79	221.12	132.24	79.03	43.65
225.0	861.64	724.78	567.11	454.05	348.64	232.71	165.09	97.20	45.34
270.0	1001.25	856.69	690.75	568.13	452.81	324.56	287.44	151.76	87.13
315.0	926.16	785.64	655.76	505.69	394.20	293.23	197.10	118.97	68.01
360.0	996.75	831.38	681.19	558.56	429.19	323.44	285.75	148.05	76.67
C/ γ (°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	36.68	21.54	16.03	14.12	12.77	11.42	10.52	9.79	9.06
45.0	30.04	18.68	15.81	13.67	12.26	11.36	10.35	9.73	9.17
90.0	21.15	16.88	14.74	13.28	12.21	11.19	10.41	9.73	9.23
135.0	24.81	18.56	16.03	14.57	13.28	12.09	11.19	10.35	9.73
180.0	22.05	17.89	16.09	14.46	13.44	12.32	11.25	10.58	9.96
225.0	26.61	19.24	16.37	15.13	13.89	12.43	11.64	10.86	10.07
270.0	42.47	22.67	17.38	15.69	14.18	12.94	11.93	11.03	10.18
315.0	32.68	19.69	15.86	14.06	12.83	11.64	10.69	9.90	9.28
360.0	36.68	21.54	16.03	14.12	12.77	11.42	10.52	9.79	9.06
C/ γ (°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	8.49	8.10	7.65	7.31	7.03	6.75	6.53	6.36	6.19
45.0	8.55	8.10	7.76	7.37	7.14	6.86	6.64	6.41	6.24
90.0	8.61	8.21	7.82	7.43	7.14	6.86	6.64	6.41	6.24
135.0	9.17	8.66	8.16	7.76	7.48	7.14	6.86	6.64	6.41
180.0	9.17	8.78	8.33	7.93	7.54	7.26	6.98	6.69	6.53
225.0	9.34	8.83	8.38	7.93	7.59	7.26	6.98	6.69	6.47
270.0	9.56	9.00	8.38	7.99	7.65	7.37	7.03	6.75	6.53
315.0	8.55	8.16	7.76	7.31	7.03	6.81	6.58	6.30	6.13
360.0	8.49	8.10	7.65	7.31	7.03	6.75	6.53	6.36	6.19

Intensity data(cd)

C/ γ (°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	6.02	5.85	5.74	5.63	5.51	5.40	5.34	5.29	5.18
45.0	6.08	5.91	5.85	5.68	5.57	5.46	5.34	5.23	5.18
90.0	6.08	5.96	5.79	5.63	5.51	5.46	5.29	5.23	5.18
135.0	6.24	6.08	5.91	5.79	5.68	5.51	5.46	5.34	5.23
180.0	6.30	6.13	5.96	5.85	5.68	5.63	5.46	5.34	5.29
225.0	6.30	6.13	5.96	5.85	5.68	5.51	5.46	5.34	5.23
270.0	6.30	6.13	5.96	5.79	5.68	5.57	5.46	5.40	5.29
315.0	5.96	5.85	5.68	5.57	5.46	5.34	5.29	5.23	5.12
360.0	6.02	5.85	5.74	5.63	5.51	5.40	5.34	5.29	5.18
C/ γ (°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	5.12	5.01	4.95	4.89	4.89	4.78	4.78	4.73	4.67
45.0	5.12	5.06	4.95	4.95	4.89	4.84	4.73	4.73	4.67
90.0	5.06	5.01	4.95	4.89	4.84	4.78	4.78	4.73	4.67
135.0	5.18	5.12	5.06	5.01	4.89	4.89	4.78	4.78	4.73
180.0	5.18	5.12	5.06	5.01	4.95	4.89	4.84	4.78	4.73
225.0	5.18	5.12	5.01	4.95	4.89	4.84	4.78	4.73	4.73
270.0	5.18	5.12	5.06	5.01	4.95	4.89	4.84	4.78	4.73
315.0	5.06	4.95	4.95	4.89	4.84	4.78	4.73	4.73	4.67
360.0	5.12	5.01	4.95	4.89	4.89	4.78	4.78	4.73	4.67
C/ γ (°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	4.67	4.61	4.56	4.50	4.50	4.50	4.50	4.44	4.44
45.0	4.61	4.61	4.56	4.56	4.50	4.50	4.50	4.39	4.39
90.0	4.61	4.61	4.61	4.56	4.56	4.50	4.50	4.44	4.44
135.0	4.67	4.61	4.61	4.56	4.56	4.50	4.50	4.44	4.44
180.0	4.67	4.67	4.61	4.56	4.56	4.50	4.50	4.44	4.44
225.0	4.67	4.61	4.56	4.56	4.50	4.50	4.44	4.39	4.39
270.0	4.67	4.67	4.61	4.61	4.56	4.56	4.50	4.50	4.44
315.0	4.61	4.61	4.56	4.50	4.50	4.50	4.44	4.39	4.39
360.0	4.67	4.61	4.56	4.50	4.50	4.50	4.50	4.44	4.44
C/ γ (°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	4.39	4.39	4.39	4.39	4.33	4.33	4.33	4.33	4.28
45.0	4.39	4.39	4.33	4.28	4.28	4.28	4.28	4.28	4.28
90.0	4.44	4.44	4.39	4.39	4.39	4.39	4.39	4.39	4.33
135.0	4.44	4.39	4.39	4.33	4.33	4.33	4.33	4.28	4.28
180.0	4.44	4.39	4.39	4.33	4.33	4.33	4.28	4.28	4.28
225.0	4.33	4.33	4.33	4.28	4.33	4.28	4.28	4.28	4.28
270.0	4.39	4.39	4.39	4.39	4.39	4.33	4.33	4.28	4.28
315.0	4.39	4.39	4.39	4.33	4.28	4.28	4.33	4.28	4.28
360.0	4.39	4.39	4.39	4.39	4.33	4.33	4.33	4.33	4.28
C/ γ (°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28
45.0	4.28	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22
90.0	4.33	4.39	4.44	4.50	4.39	4.22	4.22	4.16	4.22
135.0	4.28	4.28	4.28	4.28	4.22	4.22	4.28	4.22	4.22
180.0	4.28	4.28	4.28	4.22	4.28	4.28	4.28	4.28	4.28
225.0	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22	4.22
270.0	4.28	4.28	4.28	4.28	4.28	4.22	4.22	4.22	4.22
315.0	4.28	4.28	4.28	4.28	4.28	4.22	4.28	4.22	4.22
360.0	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28	4.28

Intensity data(cd)

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C/ $\gamma(^{\circ})$	90.0
0.0	4.22
45.0	4.22
90.0	4.22
135.0	4.22
180.0	4.22
225.0	4.22
270.0	4.22
315.0	4.22
360.0	4.22