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## NATA

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LumCAT: 2-1258-N  
Luminaire: 92.70.065.00+92.70.059.00  
Report No: NATA0100                      Voltage(V): 34.8500  
Test No: GC2019011705                    Current(A): 0.6000  
LampCAT: CITIZEN CLU038                Power (W): 20.8100  
Lamp flux(lm): 2971.0                    PF: 0.0000  
Number of Lamps: 1                      Ballast type: DC  
Length(mm): 70                          Width(mm): 70  
Phm Type: C                              Height(mm): 0

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## Photometric Results

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Lumens(lm): 2247.87  
Efficiency(%): 75.66%  
Lumens(lm)/Power(W): 108.15  
Central intensity(cd): 11985.470  
Maximum intensity(cd): 11985.470  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=18.9  
  [C90/270]Total=18.9  
Field angle(10%Imax): [C0/180]Total=38.7  
  [C90/270]Total=38.7  
Maximum s/h(1/2): C0\_180=0.33 C90\_270=0.33  
Maximum s/h(1/4): C0\_180=0.32 C90\_270=0.32  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 75.75%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.368%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	11985.469	2.867	2.867	.097%	.128%
1.0	11945.391	22.862	25.729	.769%	1.145%
2.0	11756.180	44.992	70.721	1.514%	3.146%
3.0	11451.656	65.723	136.445	2.212%	6.070%
4.0	11021.836	84.312	220.757	2.838%	9.821%
5.0	10450.758	99.884	320.641	3.362%	14.264%
6.0	9700.523	111.194	431.835	3.743%	19.211%
7.0	8664.328	115.793	547.627	3.897%	24.362%
8.0	7668.281	117.032	664.66	3.939%	29.568%
9.0	6545.461	112.286	776.945	3.779%	34.564%
10.0	5377.359	102.398	879.343	3.447%	39.119%
11.0	4477.219	93.683	973.026	3.153%	43.287%
12.0	3678.469	83.868	1056.894	2.823%	47.018%
13.0	3024.563	74.611	1131.505	2.511%	50.337%
14.0	2542.922	67.462	1198.967	2.271%	53.338%
15.0	2158.664	61.268	1260.235	2.062%	56.063%
16.0	1804.852	54.555	1314.79	1.836%	58.490%
17.0	1592.438	51.056	1365.846	1.718%	60.762%
18.0	1385.149	46.939	1412.785	1.580%	62.850%
19.0	1245.417	44.464	1457.249	1.497%	64.828%
20.0	1115.093	41.823	1499.071	1.408%	66.688%
21.0	1026.654	40.346	1539.418	1.358%	68.483%
22.0	933.258	38.338	1577.756	1.290%	70.189%
23.0	860.091	36.853	1614.609	1.240%	71.828%
24.0	795.108	35.464	1650.073	1.194%	73.406%
25.0	727.095	33.697	1683.77	1.134%	74.905%
26.0	675.851	32.490	1716.26	1.094%	76.350%
27.0	624.769	31.104	1747.364	1.047%	77.734%
28.0	572.498	29.474	1776.838	.992%	79.045%
29.0	529.355	28.143	1804.981	.947%	80.297%
30.0	490.725	26.907	1831.887	.906%	81.494%
31.0	446.948	25.243	1857.131	.850%	82.617%
32.0	411.715	23.925	1881.056	.805%	83.682%
33.0	381.790	22.803	1903.859	.768%	84.696%
34.0	348.609	21.377	1925.236	.720%	85.647%
35.0	323.754	20.364	1945.6	.685%	86.553%
36.0	300.705	19.383	1964.982	.652%	87.415%
37.0	276.237	18.230	1983.213	.614%	88.226%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	260.895	17.614	2000.827	.593%	89.010%
39.0	238.078	16.430	2017.257	.553%	89.741%
40.0	219.382	15.464	2032.721	.520%	90.429%
41.0	202.760	14.587	2047.308	.491%	91.078%
42.0	186.216	13.664	2060.972	.460%	91.686%
43.0	169.383	12.668	2073.64	.426%	92.249%
44.0	156.143	11.894	2085.535	.400%	92.778%
45.0	143.241	11.107	2096.642	.374%	93.272%
46.0	130.838	10.321	2106.963	.347%	93.731%
47.0	118.948	9.540	2116.502	.321%	94.156%
48.0	108.914	8.876	2125.378	.299%	94.551%
49.0	98.388	8.143	2133.521	.274%	94.913%
50.0	89.402	7.510	2141.031	.253%	95.247%
51.0	81.991	6.988	2148.019	.235%	95.558%
52.0	74.623	6.448	2154.467	.217%	95.845%
53.0	68.126	5.966	2160.434	.201%	96.110%
54.0	62.339	5.531	2165.964	.186%	96.356%
55.0	56.911	5.112	2171.076	.172%	96.584%
56.0	51.750	4.705	2175.781	.158%	96.793%
57.0	47.538	4.372	2180.153	.147%	96.987%
58.0	43.327	4.029	2184.183	.136%	97.167%
59.0	39.867	3.747	2187.93	.126%	97.333%
60.0	36.661	3.482	2191.412	.117%	97.488%
61.0	33.680	3.230	2194.642	.109%	97.632%
62.0	31.099	3.011	2197.653	.101%	97.766%
63.0	29.032	2.837	2200.49	.095%	97.892%
64.0	27.211	2.682	2203.172	.090%	98.011%
65.0	25.770	2.561	2205.733	.086%	98.125%
66.0	24.764	2.481	2208.214	.084%	98.236%
67.0	23.801	2.403	2210.616	.081%	98.343%
68.0	22.922	2.331	2212.947	.078%	98.446%
69.0	22.134	2.266	2215.213	.076%	98.547%
70.0	21.375	2.203	2217.416	.074%	98.645%
71.0	20.609	2.137	2219.552	.072%	98.740%
72.0	19.955	2.081	2221.634	.070%	98.833%
73.0	19.315	2.026	2223.659	.068%	98.923%
74.0	18.668	1.968	2225.627	.066%	99.010%
75.0	18.042	1.911	2227.538	.064%	99.095%

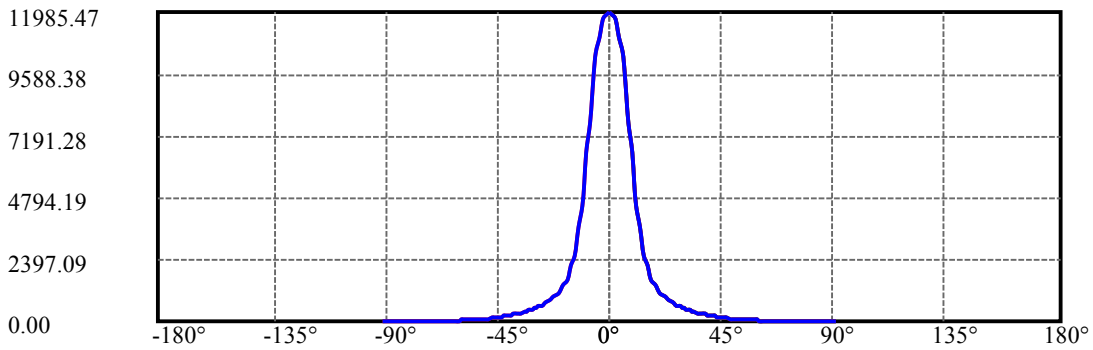
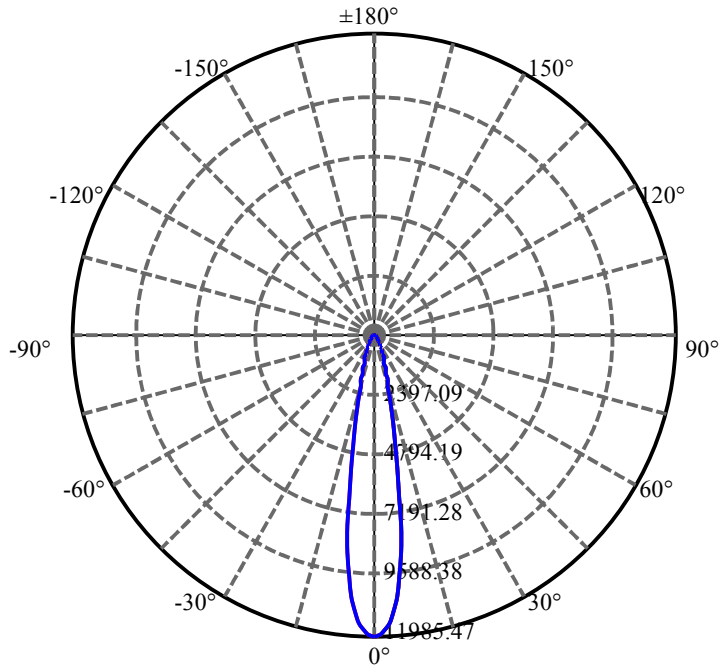
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	17.416	1.853	2229.391	.062%	99.178%
77.0	16.798	1.795	2231.186	.060%	99.258%
78.0	16.165	1.734	2232.92	.058%	99.335%
79.0	15.532	1.672	2234.592	.056%	99.409%
80.0	14.752	1.593	2236.185	.054%	99.480%
81.0	14.084	1.525	2237.71	.051%	99.548%
82.0	13.359	1.451	2239.161	.049%	99.613%
83.0	12.635	1.375	2240.536	.046%	99.674%
84.0	11.974	1.306	2241.842	.044%	99.732%
85.0	11.257	1.230	2243.072	.041%	99.786%
86.0	10.617	1.161	2244.234	.039%	99.838%
87.0	9.991	1.094	2245.328	.037%	99.887%
88.0	9.527	1.044	2246.372	.035%	99.933%
89.0	9.176	1.006	2247.378	.034%	99.978%
90.0	9.000	0.493	2247.871	.017%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1831.89	61.66%	81.49%
0-40	2032.72	68.42%	90.43%
0-60	2191.41	73.76%	97.49%
0-90	2247.38	75.64%	99.98%
0-120	2247.38	75.64%	99.98%
0-180	2247.87	75.66%	100.00%
60-90	59.45	2.00%	2.64%
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%
0-28.76	1798.30	60.53%	80.00%

ZONAL LUMEN SUMMARY

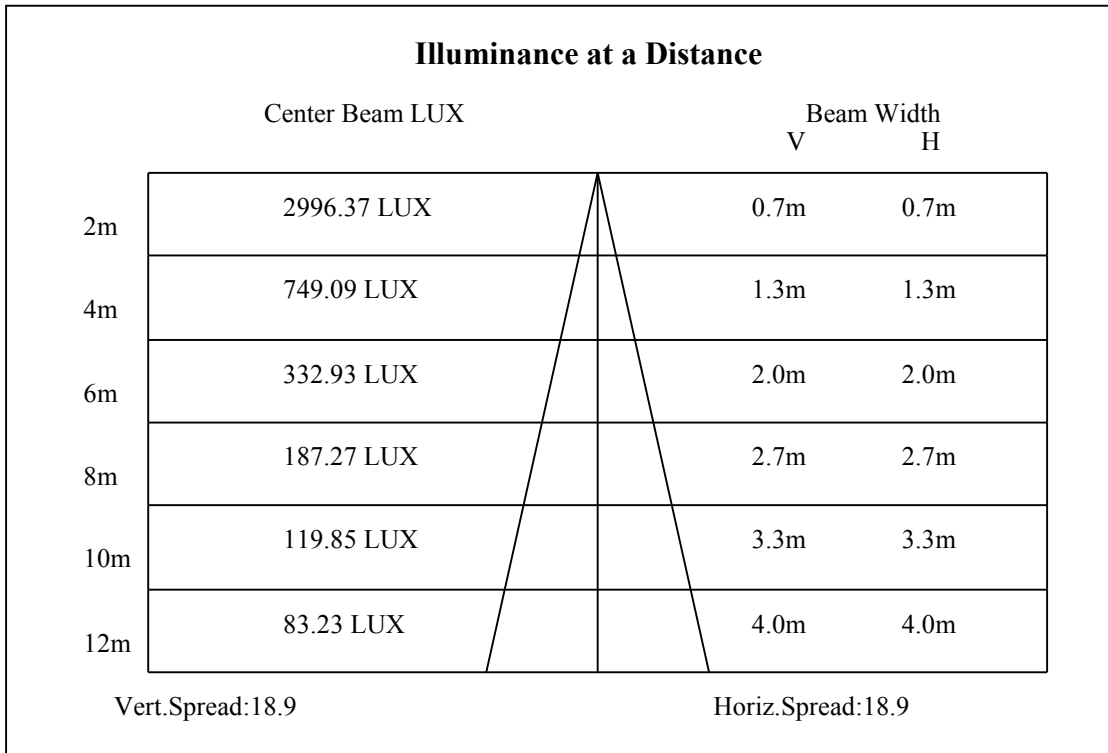
0-10	879.34
10-20	619.73
20-30	332.82
30-40	200.83
40-50	108.31
50-60	50.38
60-70	26.00
70-80	18.77
80-90	11.19
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

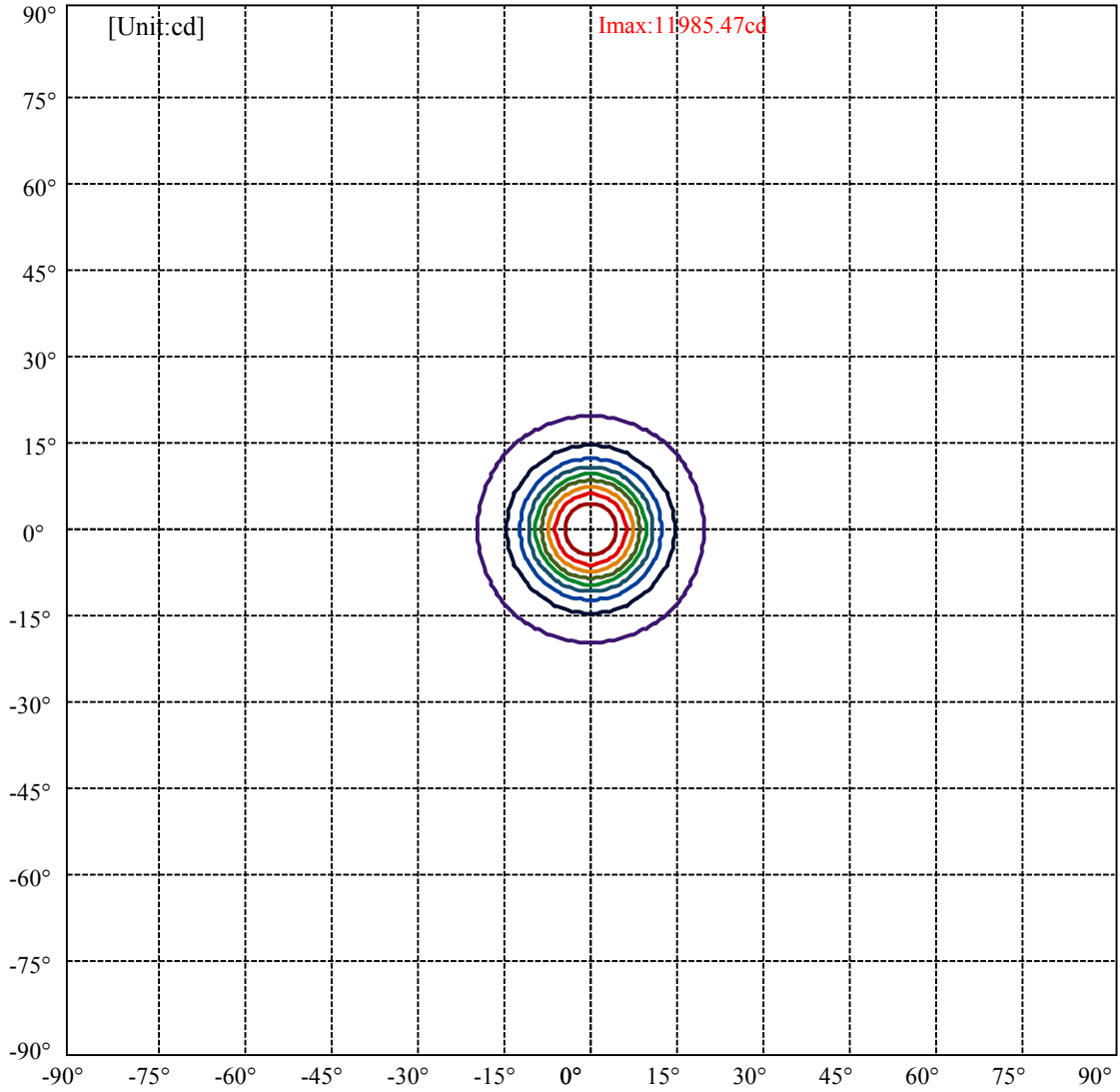


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

Field angle(10%Imax):C0/180Left:19.4 Right:19.4  
:C90/270Left:19.4 Right:19.4

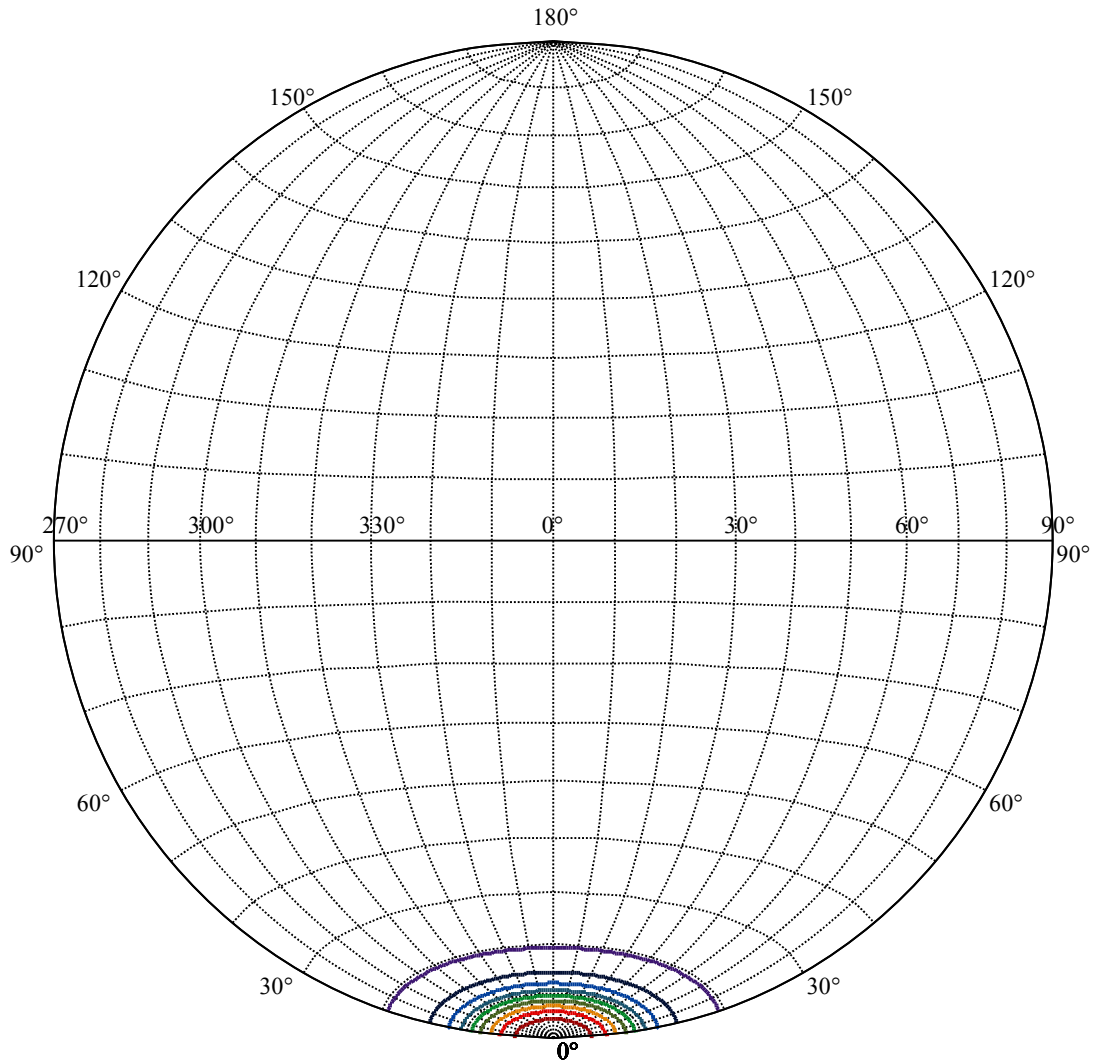
Beam Angle(50%Imax):C0/180Left:9.5 Right:9.5  
:C90/270Left:9.5 Right:9.5





(10%Imax) 1198.55	—
(20%Imax) 2397.09	—
(30%Imax) 3595.64	—
(40%Imax) 4794.19	—
(50%Imax) 5992.73	—
(60%Imax) 7191.28	—
(70%Imax) 8389.83	—
(80%Imax) 9588.38	—
(90%Imax) 10786.9	—





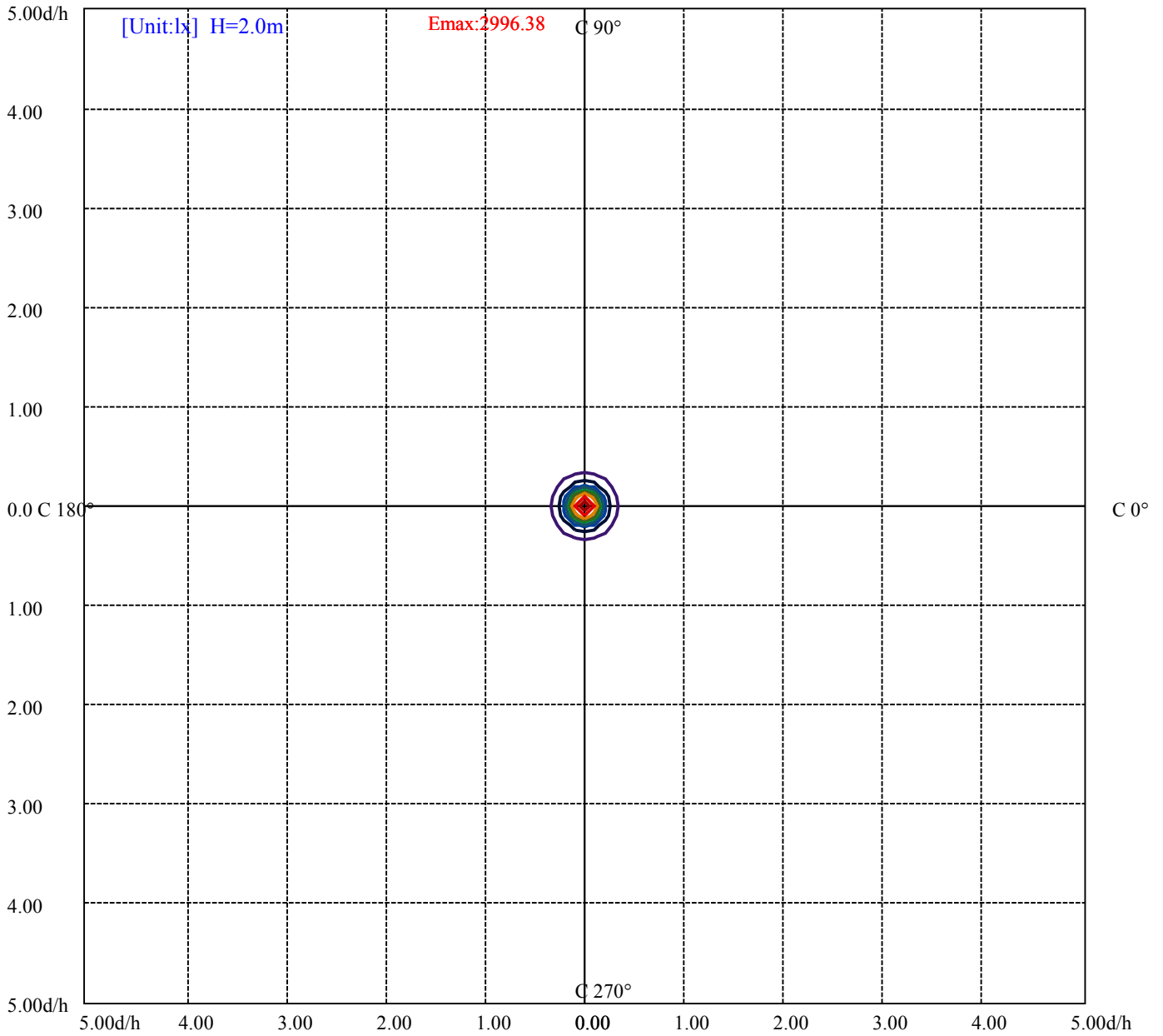
House

[Unit:cd]

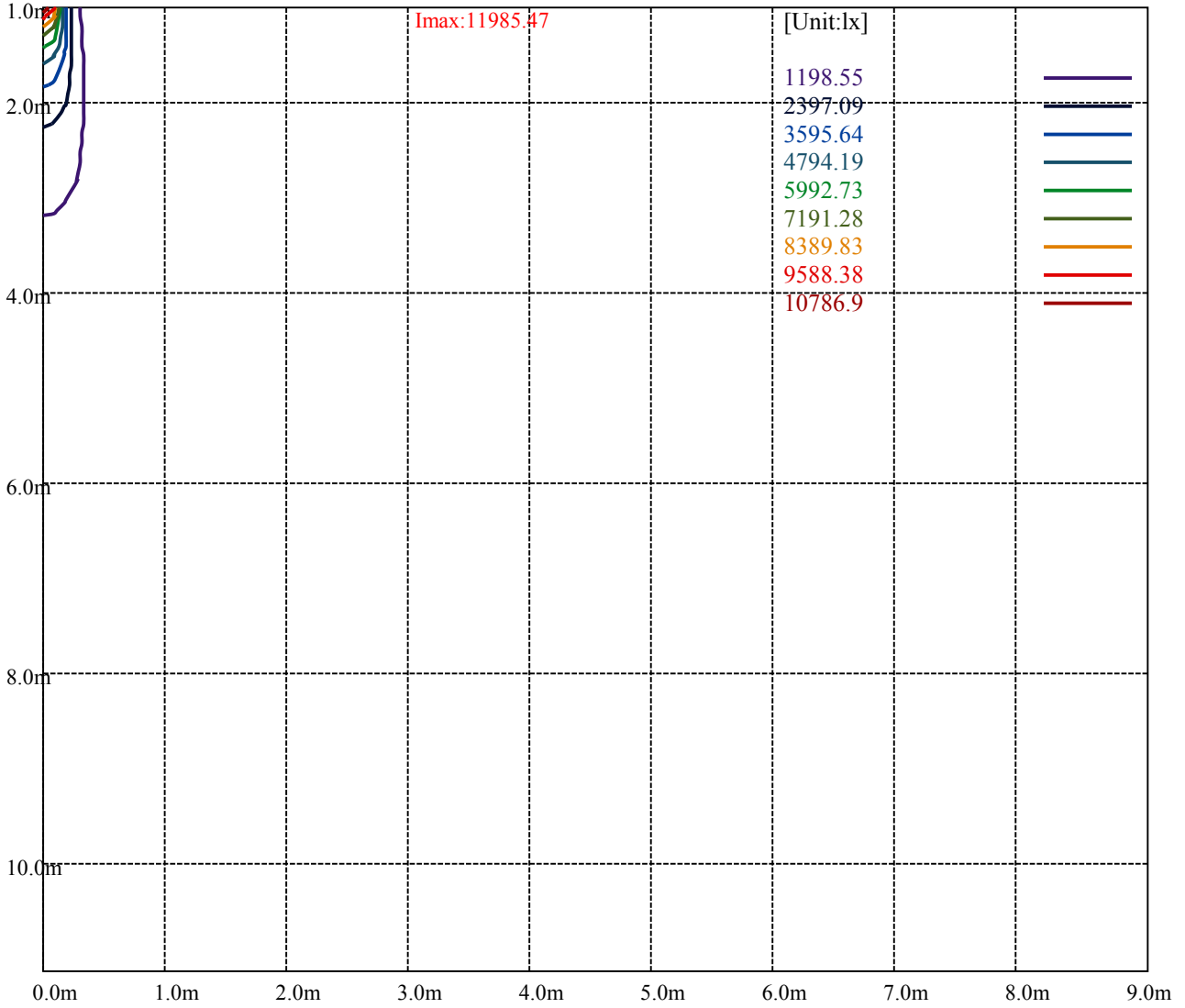
Road

**Imax:11985.47**

(10%Imax) 1198.55	—
(20%Imax) 2397.09	—
(30%Imax) 3595.64	—
(40%Imax) 4794.19	—
(50%Imax) 5992.73	—
(60%Imax) 7191.28	—
(70%Imax) 8389.83	—
(80%Imax) 9588.38	—
(90%Imax) 10786.9	—



(10%Emax) 299.6375	—
(20%Emax) 599.2725	—
(30%Emax) 898.91	—
(40%Emax) 1198.547	—
(50%Emax) 1498.182	—
(60%Emax) 1797.82	—
(70%Emax) 2097.455	—
(80%Emax) 2397.093	—
(90%Emax) 2696.725	—



Luminance Table

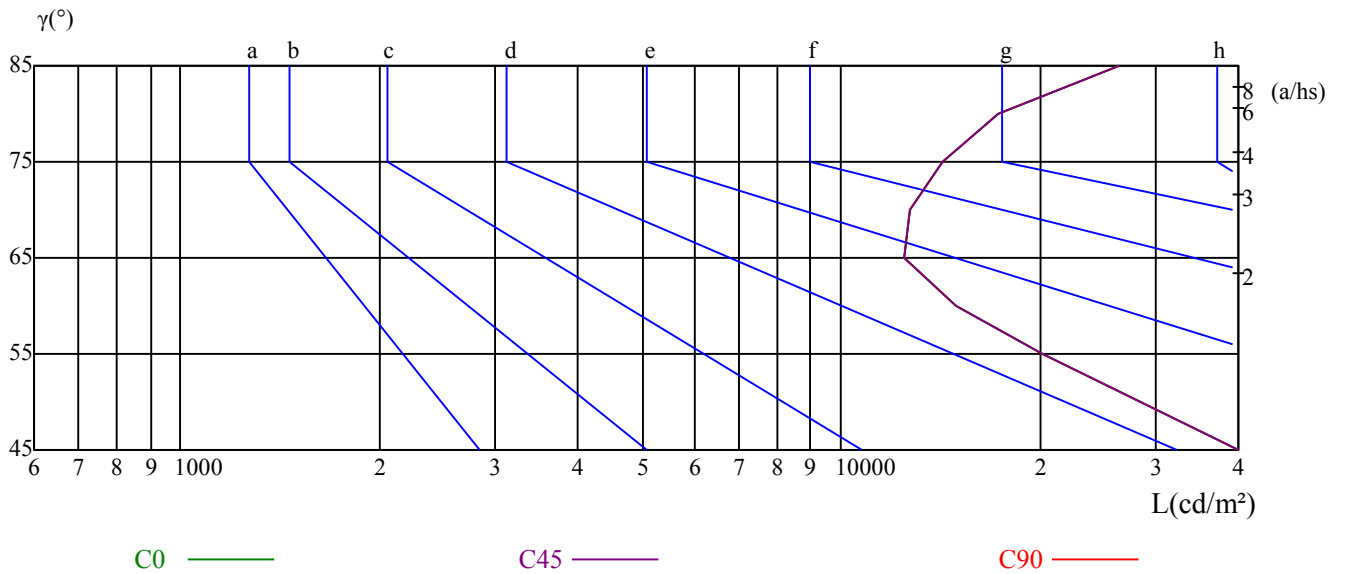
$\gamma$	45	50	55	60	65	70	75	80	85
C0	41341	28385	20249	14964	12444	12754	14226	17337	26359
C45	41341	28385	20249	14964	12444	12754	14226	17337	26359
C90	41341	28385	20249	14964	12444	12754	14226	17337	26359

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
12444	12444	12444	14226	14226	14226	26359	26359	26359

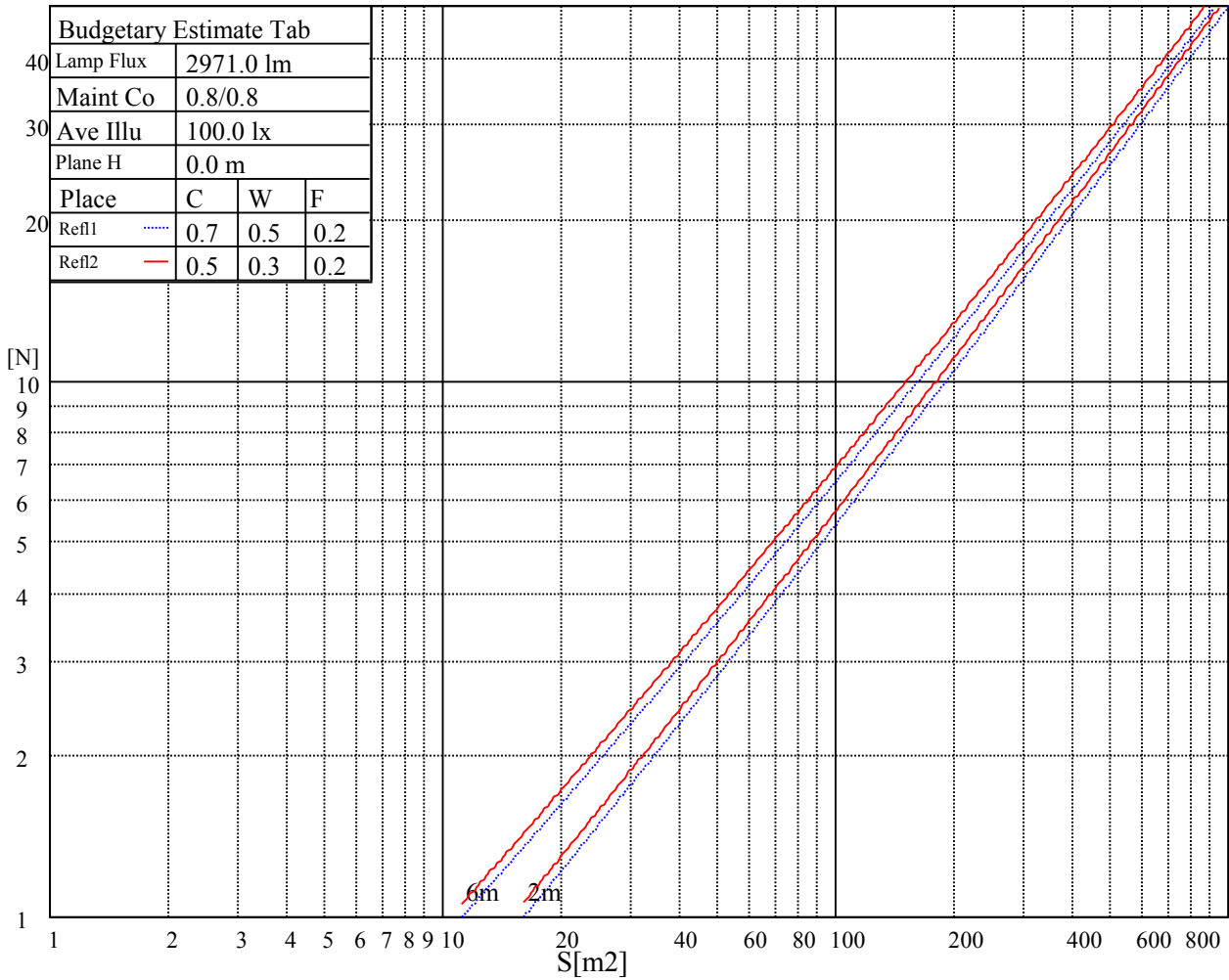
Glare Table

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

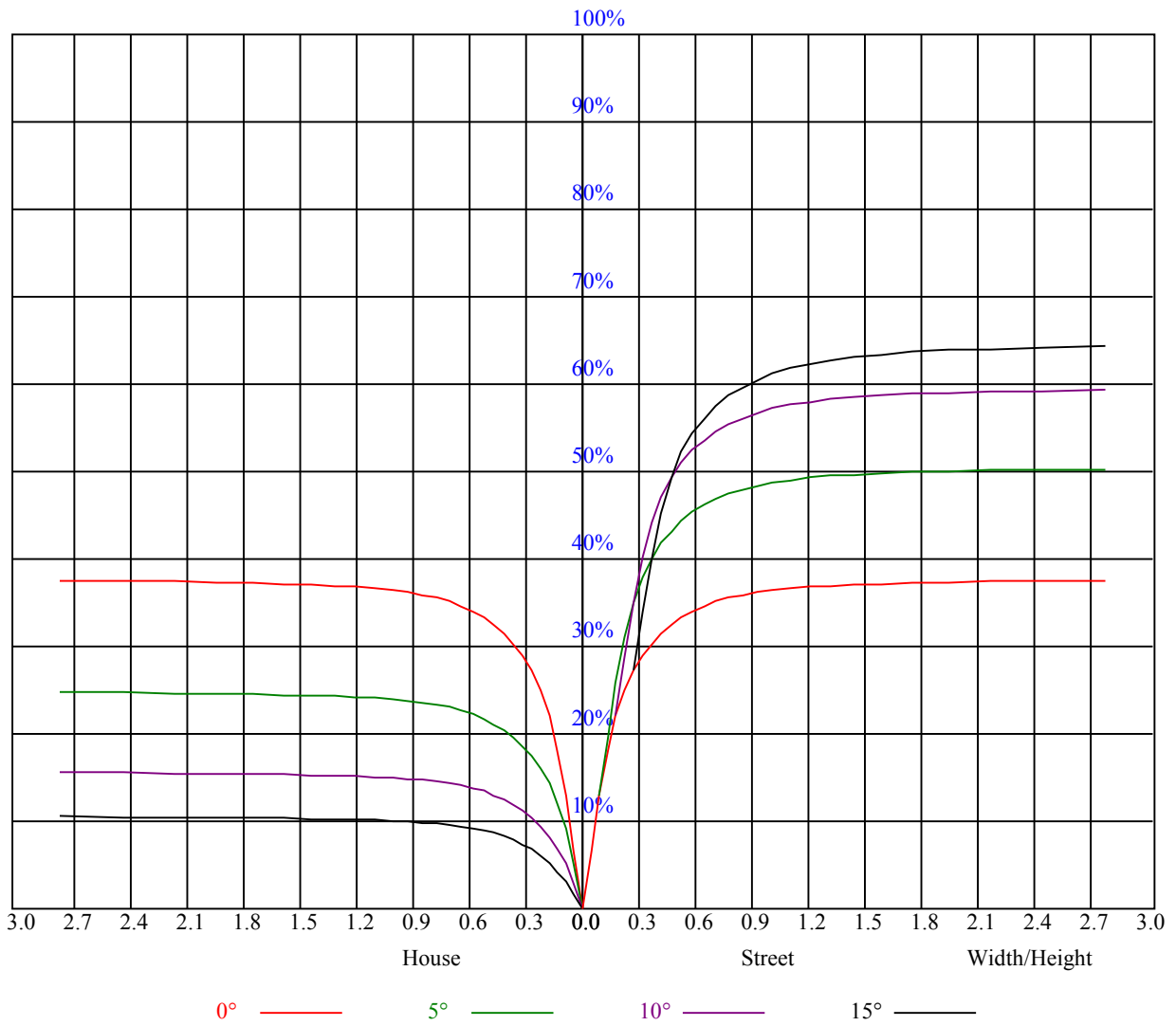
Luminance Limiting Curve



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	12.86	13.87	13.22	14.18	14.50	12.89	13.91	13.26	14.22	14.54
	3H	13.98	14.88	14.36	15.21	15.58	14.03	14.93	14.41	15.26	15.63
	4H	14.66	15.49	15.07	15.84	16.23	14.70	15.53	15.11	15.89	16.28
	6H	15.43	16.19	15.85	16.57	16.97	15.47	16.23	15.89	16.61	17.01
	8H	15.85	16.57	16.29	16.96	17.37	15.89	16.60	16.33	17.00	17.41
	12H	16.57	17.26	17.01	17.64	18.07	16.61	17.30	17.05	17.68	18.11
4H	2H	13.05	13.88	13.46	14.24	14.63	13.08	13.91	13.49	14.27	14.66
	3H	14.49	15.17	14.91	15.58	15.99	14.53	15.21	14.95	15.62	16.03
	4H	15.37	15.98	15.81	16.40	16.85	15.41	16.02	15.85	16.44	16.89
	6H	16.26	16.78	16.73	17.23	17.71	16.30	16.82	16.77	17.27	17.74
	8H	16.81	17.30	17.29	17.75	18.23	16.85	17.33	17.33	17.79	18.26
8H	12H	17.60	18.02	18.09	18.51	18.99	17.64	18.06	18.13	18.55	19.03
	4H	15.69	16.18	16.17	16.63	17.11	15.73	16.21	16.20	16.66	17.14
	6H	16.85	17.23	17.36	17.74	18.22	16.88	17.26	17.39	17.77	18.25
	8H	17.57	17.91	18.10	18.44	18.93	17.60	17.94	18.13	18.46	18.96
12H	12H	18.69	18.98	19.21	19.48	20.06	18.72	19.02	19.24	19.52	20.10
	4H	15.75	16.17	16.24	16.66	17.14	15.78	16.20	16.27	16.69	17.17
	6H	17.29	17.34	17.53	17.81	18.36	17.32	17.37	17.56	17.84	18.39
	8H	17.82	18.12	18.34	18.62	19.20	17.85	18.15	18.37	18.65	19.23
Variation with the observer position at spacings:											
S = 1.0H	1.5/-1.9					1.5/-1.9					
S = 1.5H	2.6/-2.2					2.6/-2.2					
S = 2.0H	3.9/-1.9					3.9/-1.9					
Standard tables:	BK4					BK4					
Uncorrected UGR	3.7					3.7					



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





Intensity data(cd)

C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	11919.38	12020.63	12009.38	11913.75	11638.13	11221.88	10766.25	9945.00	9118.13
45.0	12026.25	12003.75	11868.75	11581.88	11216.25	10620.00	9804.38	8921.25	7914.38
90.0	11986.88	11835.00	11587.50	11187.00	10551.94	9824.06	8938.69	7649.44	6553.13
135.0	12009.38	11880.00	11615.63	11233.13	10648.13	9871.88	9016.88	7897.50	6834.38
180.0	11919.38	11773.13	11187.56	11006.44	10328.63	9554.06	8623.13	7306.31	6214.50
225.0	12026.25	11981.25	11812.50	11133.56	11068.31	10457.44	9683.44	8530.31	7481.25
270.0	11986.88	12026.25	11992.50	11795.63	11514.38	11036.25	10338.75	9556.88	8640.00
315.0	12009.38	12043.13	11975.63	11761.88	11208.94	11020.50	10432.69	9507.94	8590.50
360.0	11919.38	12020.63	12009.38	11913.75	11638.13	11221.88	10766.25	9945.00	9118.13

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	8167.50	6879.38	5850.00	4899.38	3858.75	3200.63	2863.13	2205.56	1911.94
45.0	6570.00	5523.75	4567.50	3678.75	2986.88	2857.50	2167.88	1816.31	1616.63
90.0	5481.00	4313.25	3553.88	2948.06	2427.19	2034.56	1767.38	1535.63	1371.38
135.0	5653.13	4584.38	3768.75	3043.13	2840.63	2147.06	1866.38	1580.63	1413.00
180.0	5185.69	4080.94	3377.81	2820.38	2349.00	2001.38	1755.56	1533.38	1370.25
225.0	6385.50	5110.31	4217.06	3480.75	2838.94	2365.88	2047.50	1764.56	1564.31
270.0	7346.25	6277.50	5259.38	4235.63	3414.38	2896.88	2394.00	1971.56	1719.56
315.0	7574.63	6249.38	5223.38	4321.69	3480.75	2839.50	2407.50	2031.19	1772.44
360.0	8167.50	6879.38	5850.00	4899.38	3858.75	3200.63	2863.13	2205.56	1911.94

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1684.13	1476.56	1308.94	1184.63	1066.50	966.38	887.63	810.56	749.81
45.0	1444.50	1275.75	1146.38	1053.00	957.38	885.94	810.56	745.88	694.13
90.0	1122.02	1086.02	1010.31	927.06	846.84	796.78	741.99	672.98	631.01
135.0	1265.63	1132.31	1022.06	939.94	857.81	788.06	734.63	676.69	628.31
180.0	1114.99	1088.94	992.93	901.41	823.89	763.59	708.64	646.26	600.24
225.0	1383.75	1200.94	1119.99	1015.65	925.65	855.84	791.55	722.08	671.23
270.0	1520.44	1344.38	1203.19	1100.25	1001.25	918.00	851.63	784.69	729.00
315.0	1545.75	1358.44	1116.96	1091.31	986.74	906.13	834.24	757.63	703.07
360.0	1684.13	1476.56	1308.94	1184.63	1066.50	966.38	887.63	810.56	749.81

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	687.38	630.00	583.88	540.56	490.50	453.38	420.19	383.06	355.50
45.0	641.81	592.31	550.69	515.81	465.19	431.44	403.88	363.94	338.63
90.0	586.07	532.18	492.13	454.78	416.64	381.77	353.14	324.90	302.12
135.0	578.81	531.56	490.50	453.38	410.63	379.13	351.00	319.50	297.56
180.0	555.75	503.38	465.02	430.20	393.69	360.51	333.56	306.56	284.96
225.0	625.16	580.44	530.72	492.30	456.81	415.41	384.86	356.57	327.60
270.0	669.94	615.38	570.38	528.19	479.25	444.38	411.75	374.63	347.06
315.0	653.23	594.73	551.53	510.58	462.88	427.73	395.94	359.72	336.60
360.0	687.38	630.00	583.88	540.56	490.50	453.38	420.19	383.06	355.50

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	329.06	302.63	284.06	257.46	240.19	222.75	204.02	187.99	172.13
45.0	317.25	289.69	284.63	249.24	229.28	210.26	191.48	174.99	161.66
90.0	279.79	259.71	244.35	226.07	205.93	190.35	176.18	159.08	146.25
135.0	284.06	253.86	235.29	219.09	199.63	184.50	169.54	154.97	142.99
180.0	263.19	243.96	228.99	209.08	190.46	176.29	163.63	148.05	136.91
225.0	301.33	280.07	258.69	240.53	221.74	201.54	186.02	170.44	155.59
270.0	321.75	297.00	284.63	256.16	239.91	223.20	202.39	184.05	169.54
315.0	309.21	282.99	266.51	246.99	227.93	213.19	196.48	175.50	164.08
360.0	329.06	302.63	284.06	257.46	240.19	222.75	204.02	187.99	172.13

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	158.29	146.87	134.27	123.36	111.88	101.14	92.64	85.05	76.61
45.0	147.38	134.04	122.57	112.22	100.35	92.03	84.43	76.67	69.58
90.0	134.04	122.74	109.86	100.52	92.08	82.80	76.05	69.13	63.56
135.0	130.05	118.13	108.06	99.00	88.88	81.68	75.09	68.23	62.10
180.0	126.11	113.51	104.06	95.40	85.95	79.09	72.68	65.36	60.69
225.0	143.38	131.74	117.68	107.61	98.33	88.14	80.66	74.19	67.56
270.0	155.14	141.47	129.66	118.35	105.53	96.13	87.98	79.76	72.56
315.0	151.54	138.21	125.44	114.86	104.12	94.22	86.40	78.58	72.34
360.0	158.29	146.87	134.27	123.36	111.88	101.14	92.64	85.05	76.61
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	70.59	65.70	58.61	53.83	49.44	45.11	41.18	38.42	34.88
45.0	64.01	58.22	52.82	48.43	44.33	40.78	37.29	34.03	31.50
90.0	57.83	52.99	48.15	44.38	40.61	37.18	34.37	31.50	29.03
135.0	57.04	51.64	46.86	43.14	39.94	36.79	33.58	31.22	28.86
180.0	55.13	49.44	45.96	42.30	37.91	35.49	32.91	29.76	28.13
225.0	61.54	56.53	51.19	47.08	42.86	39.21	36.28	33.58	30.66
270.0	66.77	60.86	55.41	50.79	46.24	42.64	39.04	35.78	33.13
315.0	65.81	59.91	55.01	50.34	45.28	41.74	38.64	35.16	32.63
360.0	70.59	65.70	58.61	53.83	49.44	45.11	41.18	38.42	34.88
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	32.29	29.98	27.62	26.21	25.20	24.08	23.23	22.56	21.54
45.0	29.14	27.00	25.88	24.86	23.74	22.95	22.22	21.38	20.70
90.0	27.23	26.04	24.75	23.91	23.12	22.22	21.49	20.81	20.08
135.0	27.11	25.71	24.75	23.91	23.01	22.16	21.49	20.81	20.03
180.0	26.66	25.48	24.47	23.68	22.78	22.11	21.32	20.59	19.91
225.0	28.63	27.06	25.65	24.69	23.79	22.89	21.99	21.26	20.48
270.0	30.77	28.24	26.61	25.48	24.36	23.51	22.73	21.88	21.09
315.0	30.43	28.18	26.44	25.37	24.41	23.46	22.61	21.71	21.04
360.0	32.29	29.98	27.62	26.21	25.20	24.08	23.23	22.56	21.54
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	20.87	20.19	19.46	18.90	18.39	17.72	17.04	16.48	15.75
45.0	20.08	19.41	18.84	18.11	17.49	16.93	16.26	15.58	14.85
90.0	19.46	18.84	18.23	17.61	16.99	16.31	15.69	15.02	14.12
135.0	19.46	18.90	18.23	17.55	16.99	16.37	15.69	15.02	14.23
180.0	19.24	18.56	17.94	17.33	16.59	15.98	15.30	14.63	13.84
225.0	19.80	19.18	18.51	17.94	17.33	16.71	16.14	15.53	14.68
270.0	20.48	19.74	19.18	18.51	17.89	17.27	16.65	16.03	15.41
315.0	20.25	19.69	18.96	18.39	17.66	17.10	16.54	15.98	15.13
360.0	20.87	20.19	19.46	18.90	18.39	17.72	17.04	16.48	15.75
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	15.08	14.40	13.61	12.88	12.09	11.48	10.80	10.18	9.68
45.0	14.18	13.33	12.66	12.04	11.25	10.63	9.96	9.51	9.06
90.0	13.44	12.77	12.04	11.36	10.69	10.07	9.45	9.11	8.89
135.0	13.50	12.83	12.09	11.53	10.80	10.07	9.56	9.17	8.94
180.0	13.22	12.54	11.87	11.19	10.52	9.90	9.34	9.00	9.00
225.0	14.06	13.39	12.60	11.93	11.19	10.58	9.96	9.45	9.00
270.0	14.68	13.84	13.11	12.43	11.76	11.08	10.41	9.84	9.39
315.0	14.51	13.78	13.11	12.43	11.76	11.14	10.46	9.96	9.45
360.0	15.08	14.40	13.61	12.88	12.09	11.48	10.80	10.18	9.68

Intensity data(cd)

C/ $\gamma$ (°)	90.0
0.0	9.28
45.0	8.89
90.0	8.89
135.0	8.94
180.0	9.00
225.0	8.89
270.0	9.00
315.0	9.11
360.0	9.28