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## NATA

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LumCAT: 3-1699-N  
Luminaire: 92.70.074.00+92.70.089.00  
Report No: NATA0100  
Test No: GC2019012605  
LampCAT: CREE CXA1816  
Lamp flux(lm): 2071.0  
Number of Lamps: 1  
Length(mm): 79  
Phm Type: C

Voltage(V): 37.0000  
Current(A): 0.6000  
Power (W): 22.2000  
PF: 0.0000  
Ballast type: DC  
Width(mm): 79  
Height(mm): 0

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## Photometric Results

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Lumens(lm): 1608.84  
Efficiency(%): 77.68%  
Lumens(lm)/Power(W): 72.55  
Central intensity(cd): 7307.227  
Maximum intensity(cd): 7307.227  
Angle of maximum intensity: C=0.0  $\gamma$ =0.0  
Beam Angle(50%Imax): [C0/180]Total=21.9  
                                  [C90/270]Total=21.9  
Field angle(10%Imax): [C0/180]Total=42.8  
                                  [C90/270]Total=42.8  
Maximum s/h(1/2): C0\_180=0.37 C90\_270=0.37  
Maximum s/h(1/4): C0\_180=0.38 C90\_270=0.38  
Up flux rate of lamp(%): 0.00%  
Down flux rate of lamp(%): 77.77%  
Up flux rate of LUM(%): - -  
Down flux rate of LUM(%): 100.00%  
CIE Type : Direct lighting  
Output flux ratio in  $\pi$  solid angle : 97.626%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	7307.227	1.748	1.748	.084%	.109%
1.0	7266.586	13.907	15.655	.672%	.973%
2.0	7140.516	27.328	42.983	1.320%	2.672%
3.0	6918.891	39.709	82.692	1.917%	5.140%
4.0	6635.180	50.756	133.448	2.451%	8.295%
5.0	6292.617	60.142	193.59	2.904%	12.033%
6.0	5907.375	67.714	261.305	3.270%	16.242%
7.0	5460.891	72.981	334.286	3.524%	20.778%
8.0	5043.094	76.967	411.252	3.716%	25.562%
9.0	4557.375	78.181	489.433	3.775%	30.422%
10.0	4070.180	77.506	566.939	3.742%	35.239%
11.0	3626.156	75.875	642.814	3.664%	39.955%
12.0	3183.047	72.573	715.387	3.504%	44.466%
13.0	2724.328	67.205	782.591	3.245%	48.643%
14.0	2335.430	61.957	844.549	2.992%	52.494%
15.0	1995.891	56.648	901.197	2.735%	56.015%
16.0	1656.492	50.070	951.267	2.418%	59.128%
17.0	1385.430	44.419	995.686	2.145%	61.889%
18.0	1171.252	39.690	1035.376	1.916%	64.356%
19.0	1010.419	36.074	1071.45	1.742%	66.598%
20.0	871.284	32.679	1104.129	1.578%	68.629%
21.0	765.879	30.098	1134.227	1.453%	70.500%
22.0	683.065	28.060	1162.287	1.355%	72.244%
23.0	616.943	26.435	1188.722	1.276%	73.887%
24.0	566.163	25.253	1213.975	1.219%	75.457%
25.0	514.934	23.864	1237.839	1.152%	76.940%
26.0	475.966	22.881	1260.72	1.105%	78.362%
27.0	437.970	21.804	1282.524	1.053%	79.717%
28.0	401.857	20.689	1303.213	.999%	81.003%
29.0	369.633	19.651	1322.864	.949%	82.225%
30.0	340.116	18.649	1341.513	.900%	83.384%
31.0	309.143	17.460	1358.973	.843%	84.469%
32.0	284.674	16.543	1375.516	.799%	85.498%
33.0	259.566	15.503	1391.019	.749%	86.461%
34.0	239.140	14.664	1405.683	.708%	87.373%
35.0	217.090	13.655	1419.338	.659%	88.221%
36.0	198.865	12.818	1432.156	.619%	89.018%
37.0	182.348	12.034	1444.19	.581%	89.766%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	166.591	11.247	1455.438	.543%	90.465%
39.0	152.430	10.520	1465.957	.508%	91.119%
40.0	140.140	9.878	1475.835	.477%	91.733%
41.0	128.074	9.214	1485.05	.445%	92.306%
42.0	116.599	8.556	1493.605	.413%	92.838%
43.0	106.052	7.931	1501.537	.383%	93.331%
44.0	96.996	7.389	1508.926	.357%	93.790%
45.0	88.770	6.883	1515.809	.332%	94.218%
46.0	81.274	6.411	1522.22	.310%	94.616%
47.0	73.983	5.933	1528.154	.287%	94.985%
48.0	67.641	5.512	1533.666	.266%	95.328%
49.0	60.940	5.044	1538.71	.244%	95.641%
50.0	54.809	4.604	1543.314	.222%	95.927%
51.0	49.627	4.229	1547.543	.204%	96.190%
52.0	44.796	3.871	1551.414	.187%	96.431%
53.0	40.191	3.520	1554.934	.170%	96.650%
54.0	36.155	3.208	1558.141	.155%	96.849%
55.0	32.562	2.925	1561.066	.141%	97.031%
56.0	29.187	2.653	1563.72	.128%	97.196%
57.0	26.459	2.433	1566.153	.117%	97.347%
58.0	23.801	2.213	1568.367	.107%	97.484%
59.0	21.656	2.036	1570.402	.098%	97.611%
60.0	19.856	1.886	1572.288	.091%	97.728%
61.0	18.619	1.786	1574.074	.086%	97.839%
62.0	17.810	1.724	1575.798	.083%	97.946%
63.0	17.170	1.678	1577.476	.081%	98.051%
64.0	16.566	1.633	1579.109	.079%	98.152%
65.0	16.045	1.595	1580.703	.077%	98.251%
66.0	15.609	1.564	1582.267	.076%	98.348%
67.0	15.124	1.527	1583.794	.074%	98.443%
68.0	14.730	1.498	1585.292	.072%	98.536%
69.0	14.309	1.465	1586.756	.071%	98.628%
70.0	13.936	1.436	1588.192	.069%	98.717%
71.0	13.535	1.403	1589.596	.068%	98.804%
72.0	13.127	1.369	1590.965	.066%	98.889%
73.0	12.762	1.338	1592.303	.065%	98.972%
74.0	12.368	1.304	1593.607	.063%	99.053%
75.0	11.967	1.268	1594.875	.061%	99.132%

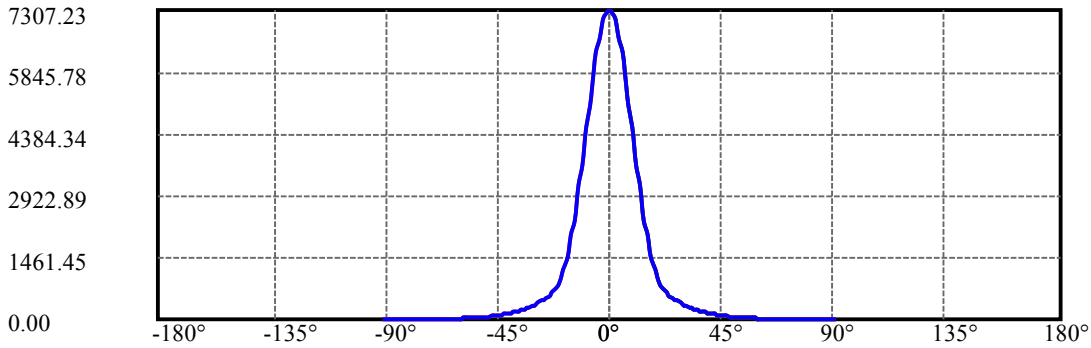
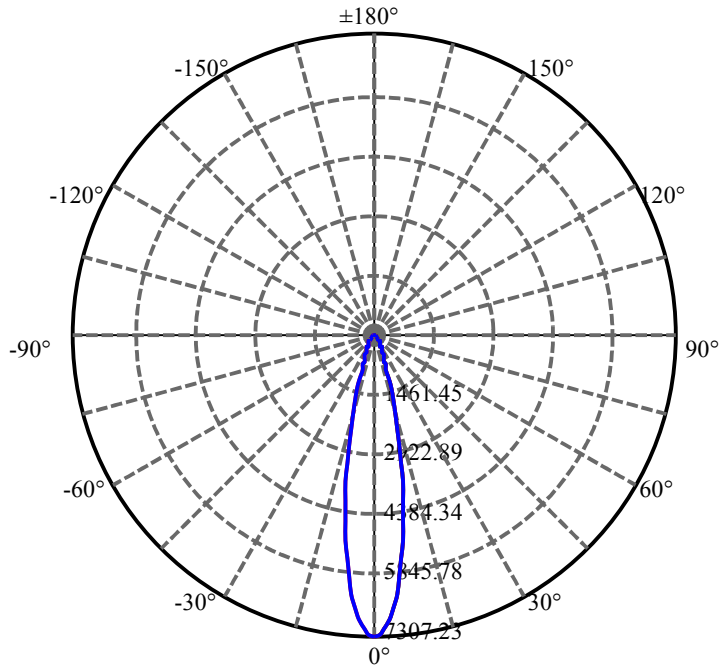
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	11.538	1.228	1596.102	.059%	99.208%
77.0	11.130	1.189	1597.292	.057%	99.282%
78.0	10.702	1.148	1598.44	.055%	99.354%
79.0	10.287	1.107	1599.547	.053%	99.423%
80.0	9.879	1.067	1600.614	.052%	99.489%
81.0	9.478	1.027	1601.64	.050%	99.553%
82.0	9.091	0.987	1602.628	.048%	99.614%
83.0	8.719	0.949	1603.577	.046%	99.673%
84.0	8.339	0.909	1604.486	.044%	99.730%
85.0	7.966	0.870	1605.356	.042%	99.784%
86.0	7.580	0.829	1606.186	.040%	99.835%
87.0	7.221	0.791	1606.976	.038%	99.884%
88.0	6.940	0.761	1607.737	.037%	99.932%
89.0	6.722	0.737	1608.474	.036%	99.977%
90.0	6.630	0.364	1608.837	.018%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1341.51	64.78%	83.38%
0-40	1475.84	71.26%	91.73%
0-60	1572.29	75.92%	97.73%
0-90	1608.47	77.67%	99.98%
0-120	1608.47	77.67%	99.98%
0-180	1608.84	77.68%	100.00%
60-90	38.07	1.84%	2.37%
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%
0-27.22	1287.07	62.15%	80.00%

ZONAL LUMEN SUMMARY

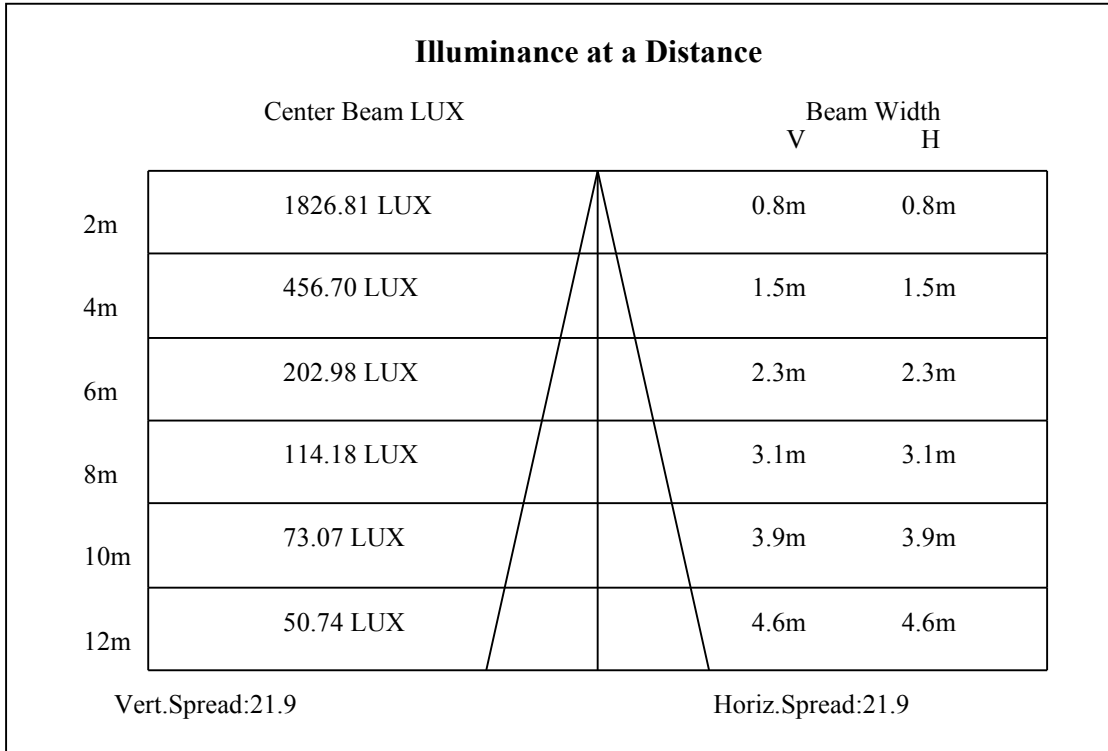
0-10	566.94
10-20	537.19
20-30	237.38
30-40	134.32
40-50	67.48
50-60	28.97
60-70	15.90
70-80	12.42
80-90	7.86
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00

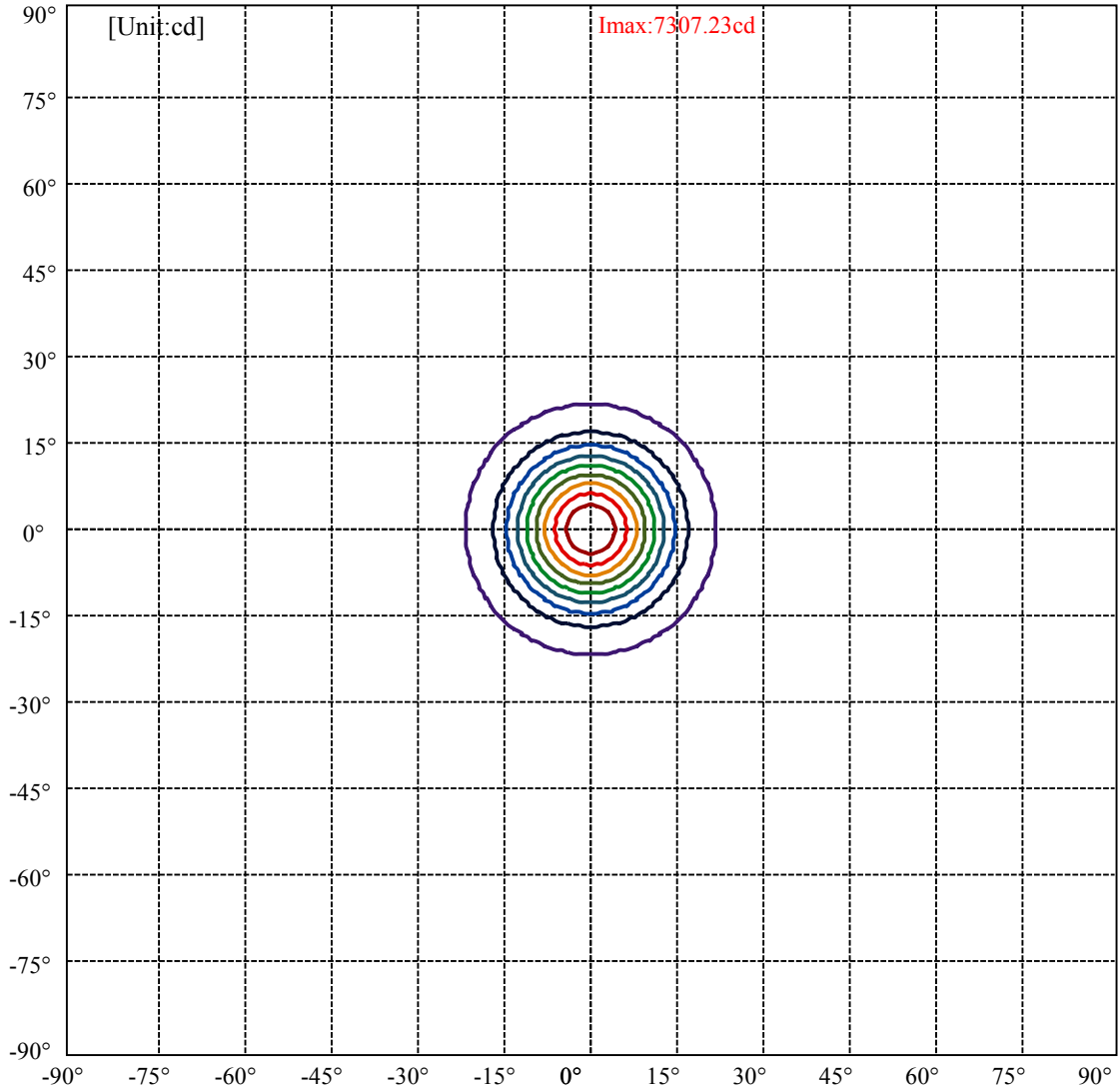


C0(Max): —————  
C0/C180: —————  
C90/C270: —————

Field angle(10%Imax):C0/180Left:21.4 Right:21.4  
:C90/270Left:21.4 Right:21.4

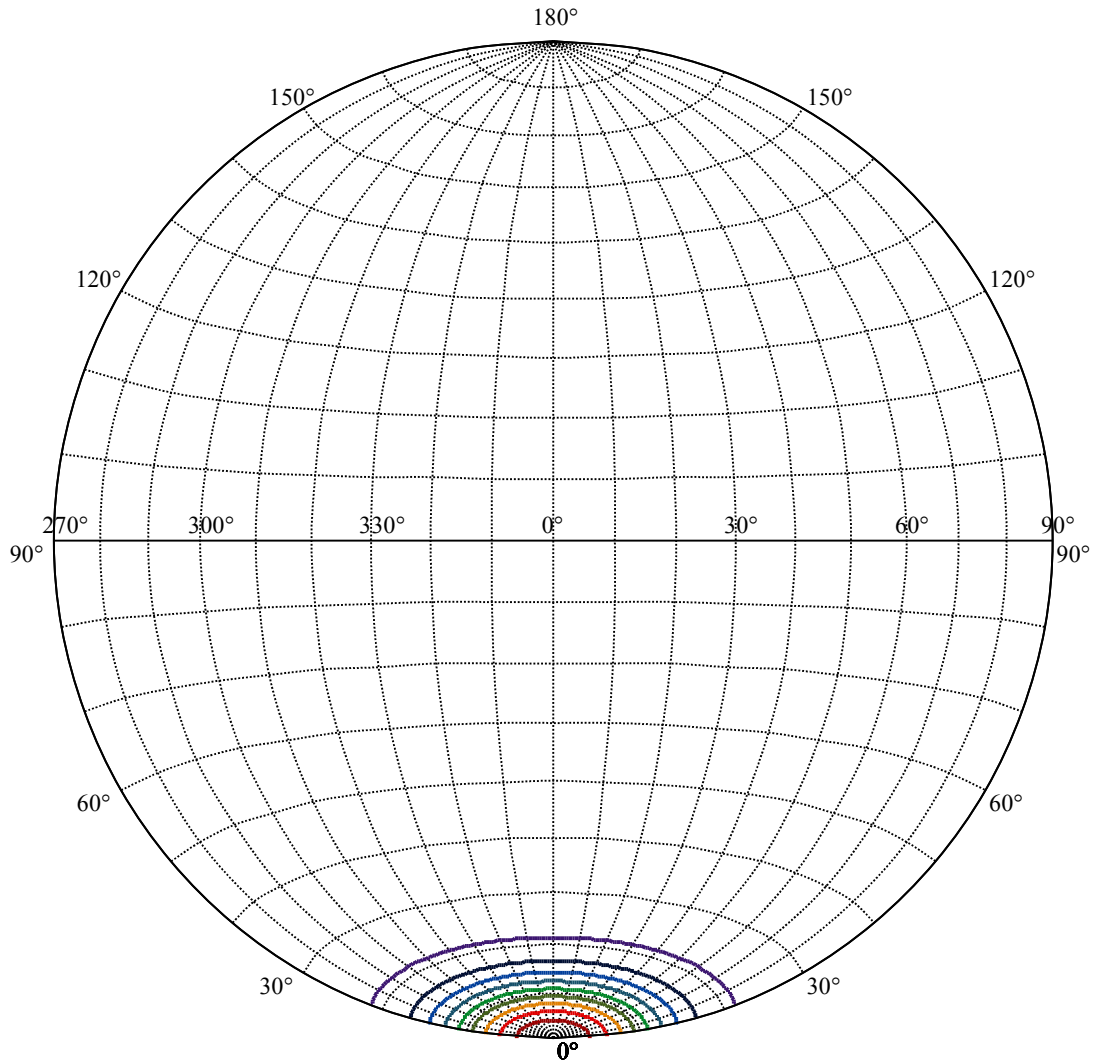
Beam Angle(50%Imax):C0/180Left:10.9 Right:10.9  
:C90/270Left:10.9 Right:10.9





(10%Imax) 730.723	—
(20%Imax) 1461.45	—
(30%Imax) 2192.17	—
(40%Imax) 2922.89	—
(50%Imax) 3653.61	—
(60%Imax) 4384.34	—
(70%Imax) 5115.06	—
(80%Imax) 5845.78	—
(90%Imax) 6576.5	—





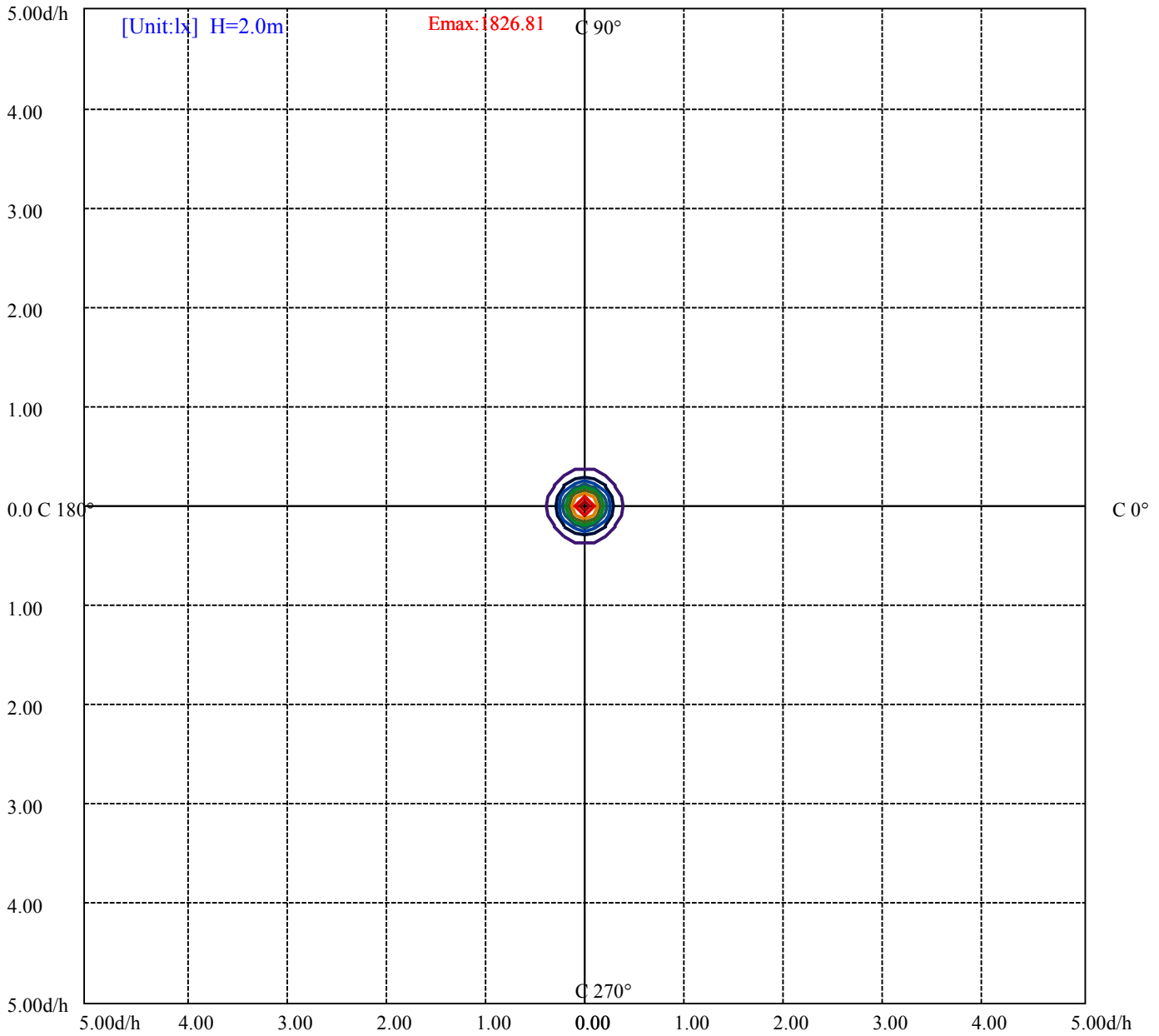
House

[Unit:cd]

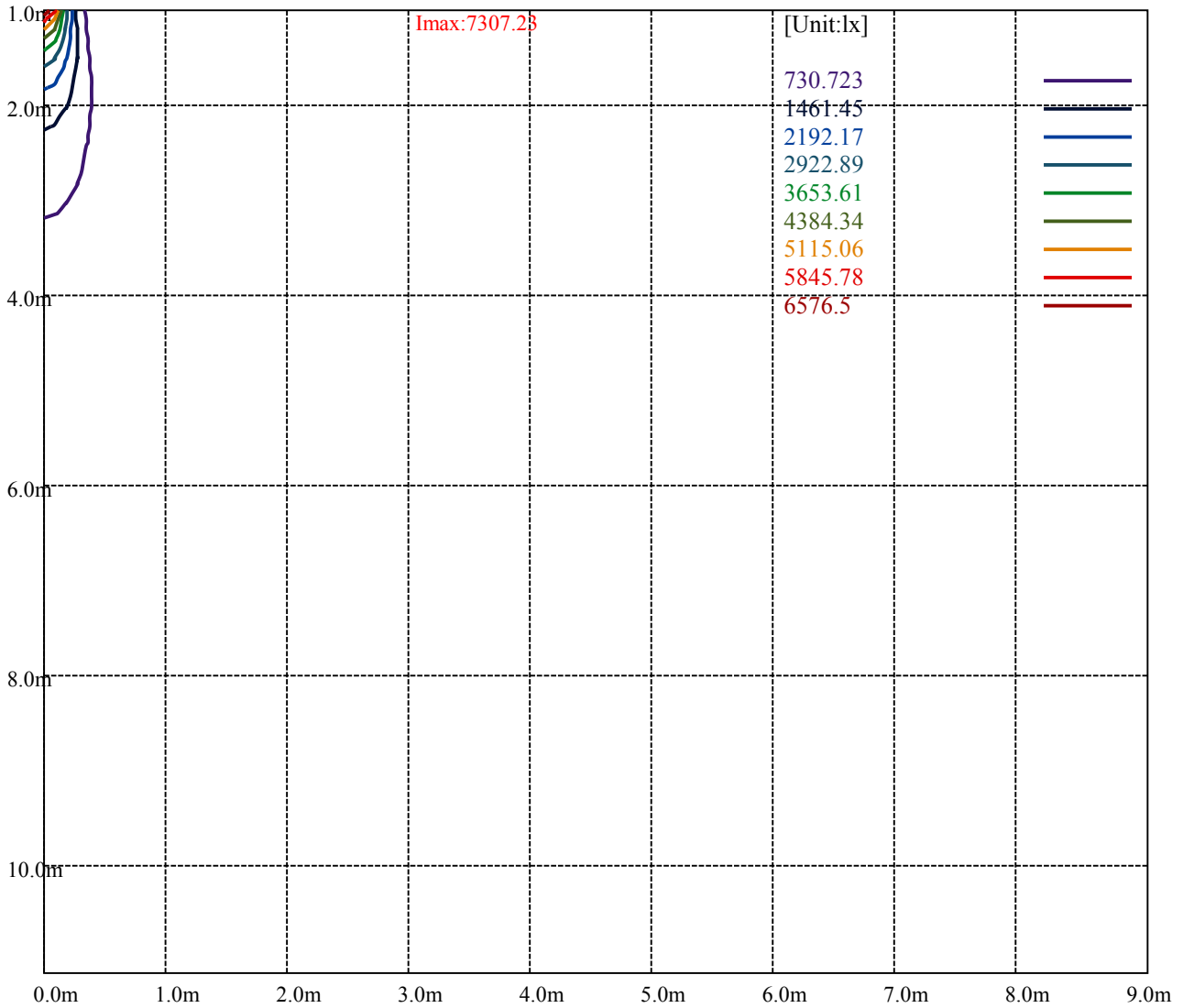
Road

**Imax:7307.23**

(10%Imax) 730.723	—
(20%Imax) 1461.45	—
(30%Imax) 2192.17	—
(40%Imax) 2922.89	—
(50%Imax) 3653.61	—
(60%Imax) 4384.34	—
(70%Imax) 5115.06	—
(80%Imax) 5845.78	—
(90%Imax) 6576.5	—



- (10%Emax) 182.6805
- (20%Emax) 365.36
- (30%Emax) 548.0425
- (40%Emax) 730.7225
- (50%Emax) 913.4025
- (60%Emax) 1096.083
- (70%Emax) 1278.762
- (80%Emax) 1461.445
- (90%Emax) 1644.125



Luminance Table

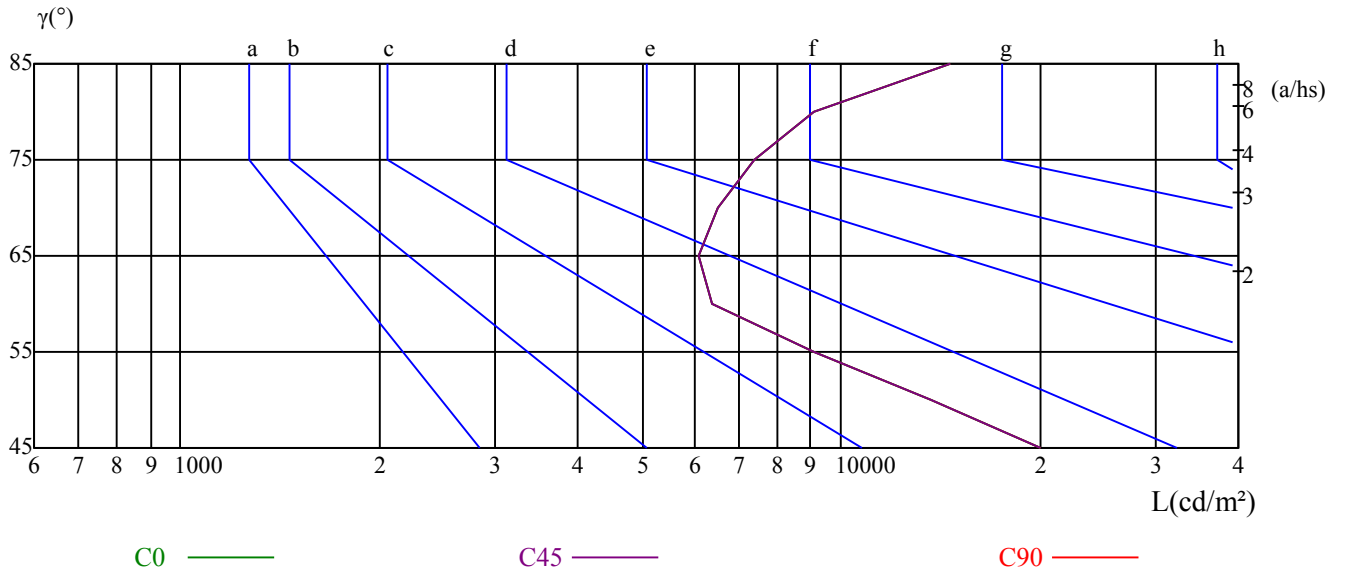
$\gamma$	45	50	55	60	65	70	75	80	85
C0	20115	13662	9096	6363	6083	6529	7409	9116	14646
C45	20115	13662	9096	6363	6083	6529	7409	9116	14646
C90	20115	13662	9096	6363	6083	6529	7409	9116	14646

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
6083	6083	6083	7409	7409	7409	14646	14646	14646

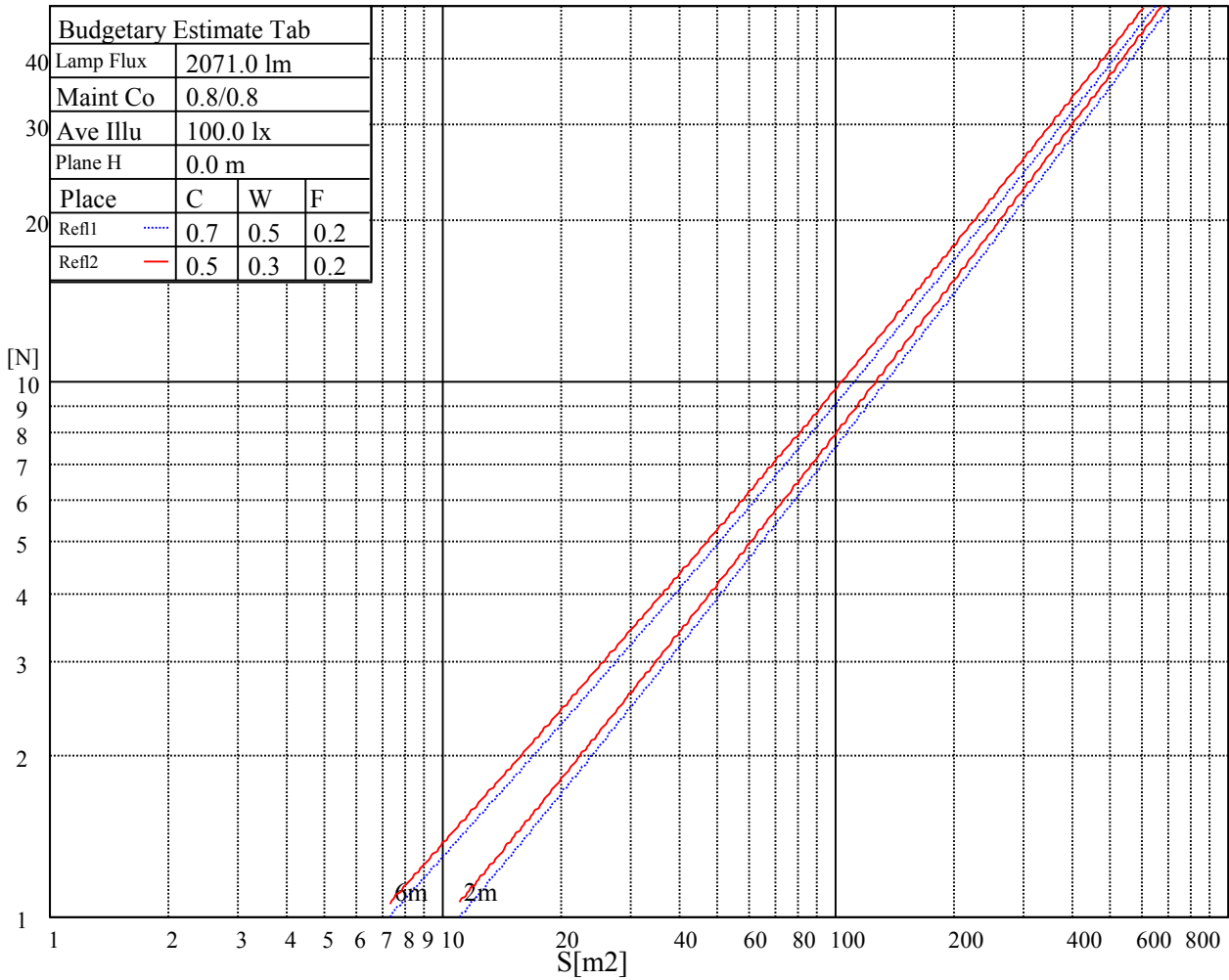
Glare Table

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

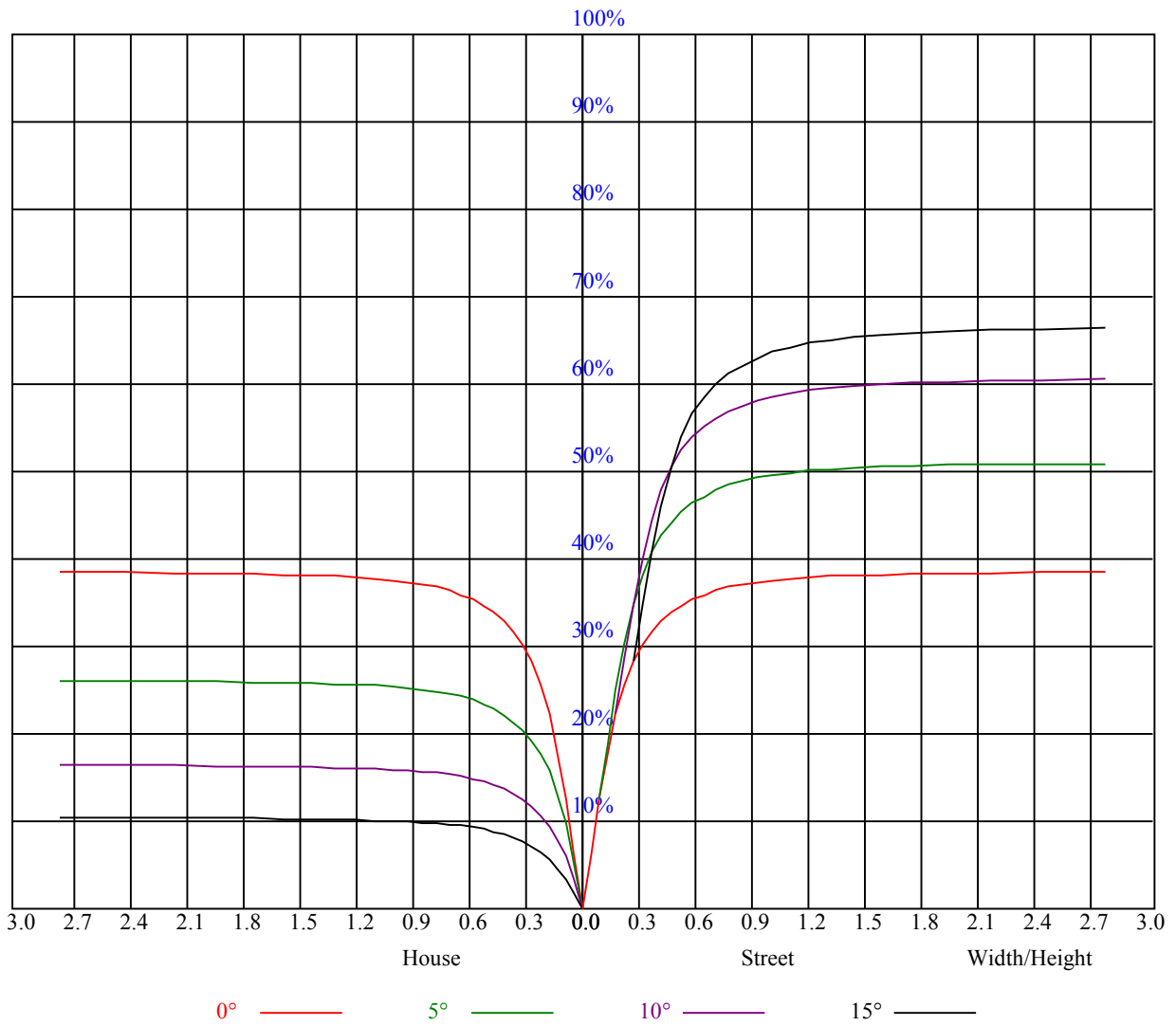
Luminance Limiting Curve



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	10.32	11.32	10.69	11.63	11.95	10.36	11.36	10.73	11.67	11.99
	3H	11.79	12.67	12.17	13.00	13.37	11.82	12.70	12.20	13.03	13.40
	4H	12.64	13.46	13.05	13.81	14.20	12.68	13.49	13.08	13.85	14.24
	6H	13.59	14.34	14.01	14.71	15.11	13.62	14.36	14.04	14.74	15.14
	8H	14.10	14.80	14.54	15.20	15.61	14.13	14.83	14.56	15.22	15.63
	12H	14.98	15.65	15.41	16.03	16.46	15.02	15.69	15.45	16.07	16.50
4H	2H	10.62	11.43	11.03	11.79	12.18	10.65	11.47	11.06	11.82	12.21
	3H	12.43	13.10	12.85	13.51	13.92	12.46	13.12	12.87	13.53	13.94
	4H	13.50	14.10	13.94	14.52	14.97	13.52	14.12	13.96	14.54	14.99
	6H	14.55	15.07	15.02	15.52	15.99	14.58	15.09	15.05	15.54	16.01
	8H	15.20	15.68	15.67	16.13	16.60	15.22	15.70	15.70	16.15	16.63
	12H	16.12	16.53	16.61	17.02	17.50	16.16	16.57	16.65	17.06	17.54
8H	4H	13.89	14.37	14.37	14.82	15.30	13.91	14.39	14.39	14.84	15.32
	6H	15.22	15.60	15.73	16.10	16.59	15.24	15.62	15.75	16.12	16.61
	8H	16.04	16.38	16.57	16.90	17.40	16.07	16.40	16.60	16.93	17.42
	12H	17.26	17.55	17.78	18.05	18.63	17.30	17.59	17.82	18.09	18.67
12H	4H	13.97	14.38	14.46	14.87	15.35	13.99	14.40	14.48	14.89	15.37
	6H	15.68	15.73	15.93	16.21	16.75	15.69	15.75	15.95	16.22	16.77
	8H	16.33	16.62	16.85	17.12	17.70	16.35	16.64	16.87	17.14	17.72
Variation with the observer position at spacings:											
S = 1.0H	1.8/-2.1					1.8/-2.1					
S = 1.5H	3.0/-2.1					3.0/-2.1					
S = 2.0H	4.2/-1.9					4.2/-1.9					
Standard tables:	BK4					BK4					
Uncorrected UGR	0.8					0.8					



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	0.93	0.93	0.93	0.90	0.90	0.90	0.86	0.86	0.86	0.83	0.83	0.83	0.79	0.79	0.79	0.78
1	0.87	0.85	0.83	0.85	0.84	0.82	0.82	0.81	0.80	0.79	0.78	0.77	0.76	0.76	0.75	0.74
2	0.82	0.79	0.77	0.81	0.78	0.76	0.78	0.76	0.74	0.76	0.74	0.73	0.74	0.73	0.71	0.70
3	0.78	0.75	0.72	0.77	0.74	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.71	0.70	0.68	0.67
4	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.69	0.67	0.70	0.68	0.66	0.69	0.67	0.65	0.64
5	0.71	0.67	0.65	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.67	0.64	0.63	0.62
6	0.68	0.64	0.62	0.68	0.64	0.62	0.66	0.63	0.61	0.65	0.63	0.61	0.65	0.62	0.60	0.59
7	0.66	0.62	0.59	0.65	0.62	0.59	0.64	0.61	0.59	0.63	0.61	0.59	0.63	0.60	0.58	0.57
8	0.63	0.60	0.57	0.63	0.59	0.57	0.62	0.59	0.57	0.61	0.59	0.57	0.61	0.58	0.56	0.56
9	0.61	0.58	0.55	0.61	0.57	0.55	0.60	0.57	0.55	0.60	0.57	0.55	0.59	0.57	0.55	0.54
10	0.59	0.56	0.54	0.59	0.56	0.53	0.58	0.55	0.53	0.58	0.55	0.53	0.57	0.55	0.53	0.52





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	7274.81	7342.31	7308.56	7177.50	6974.44	6670.13	6347.25	5945.06	5552.44
45.0	7304.63	7346.81	7287.19	7153.31	6909.19	6587.44	6260.63	5835.94	5434.31
90.0	7322.63	7278.75	7155.56	6912.56	6639.19	6310.69	5897.81	5446.69	5023.69
135.0	7320.94	7268.06	7120.13	6915.38	6614.44	6247.13	5880.94	5428.13	5007.94
180.0	7286.63	7137.56	6931.69	6639.75	6276.94	5914.69	5517.00	4975.88	4535.44
225.0	7304.63	7189.88	7003.13	6679.13	6363.56	6000.19	5561.44	5092.88	4661.44
270.0	7322.63	7284.38	7142.06	6940.69	6637.50	6262.31	5890.50	5447.81	5034.94
315.0	7320.94	7284.94	7175.81	6932.81	6666.19	6348.38	5903.44	5514.75	5094.56
360.0	7274.81	7342.31	7308.56	7177.50	6974.44	6670.13	6347.25	5945.06	5552.44
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5088.38	4612.50	4172.06	3786.75	3199.50	2787.75	2454.19	1979.44	1683.00
45.0	4962.38	4470.19	4026.38	3588.75	3052.13	2655.00	2297.25	1891.13	1600.31
90.0	4530.38	4023.56	3586.50	3110.06	2711.25	2302.88	1937.25	1648.69	1401.19
135.0	4522.50	4021.31	3580.31	3153.94	2649.38	2284.88	1959.75	1607.63	1361.81
180.0	4086.56	3532.50	3109.50	2712.38	2302.88	1934.44	1652.06	1375.88	1120.84
225.0	4167.00	3678.19	3249.56	2786.63	2406.38	2032.31	1699.31	1442.81	1111.67
270.0	4550.63	4059.56	3625.88	3198.94	2697.19	2329.31	1988.44	1620.56	1373.63
315.0	4521.19	4163.63	3659.06	3126.94	2775.94	2356.88	1978.88	1685.81	1431.00
360.0	5088.38	4612.50	4172.06	3786.75	3199.50	2787.75	2454.19	1979.44	1683.00
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	1464.75	1202.06	1018.13	903.94	776.25	688.50	631.69	566.44	522.00
45.0	1359.56	1168.31	976.50	860.06	768.38	681.19	623.25	571.50	522.56
90.0	1104.02	991.91	868.73	742.28	680.79	622.63	573.30	520.48	483.13
135.0	1160.44	988.88	847.69	755.44	672.75	608.06	559.69	511.88	474.75
180.0	983.81	842.12	745.59	662.79	598.44	551.08	509.79	463.73	430.26
225.0	1014.58	884.81	781.14	682.76	620.94	567.90	516.99	472.78	438.58
270.0	1171.13	991.13	849.94	752.06	667.13	600.19	551.81	504.00	465.75
315.0	1111.73	1014.13	882.56	767.70	679.84	615.99	562.78	508.67	470.70
360.0	1464.75	1202.06	1018.13	903.94	776.25	688.50	631.69	566.44	522.00
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	482.06	437.06	404.44	374.63	337.50	309.94	285.75	259.26	236.59
45.0	478.13	443.25	406.69	376.88	344.81	315.56	289.69	284.06	239.63
90.0	444.04	410.68	375.36	341.44	314.38	286.93	264.66	241.71	222.86
135.0	437.06	402.19	372.38	343.13	308.25	286.31	257.91	232.99	215.21
180.0	398.87	364.44	330.92	303.53	276.64	252.39	232.31	212.01	195.36
225.0	402.36	372.21	341.33	312.08	287.33	262.18	238.33	218.81	200.98
270.0	425.81	389.81	359.44	330.75	297.00	285.19	251.21	229.89	209.93
315.0	435.43	395.21	366.53	338.51	307.24	278.89	256.67	234.39	216.17
360.0	482.06	437.06	404.44	374.63	337.50	309.94	285.75	259.26	236.59
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	217.86	198.56	180.73	166.56	152.27	140.91	129.15	117.11	107.83
45.0	222.30	203.79	183.99	168.58	154.74	140.51	127.35	116.66	105.98
90.0	201.09	185.34	171.11	154.97	143.10	131.63	120.49	108.51	99.68
135.0	199.86	181.46	166.61	153.79	142.14	128.48	115.65	105.92	96.08
180.0	178.09	162.90	150.64	138.26	125.72	115.03	105.58	94.89	87.24
225.0	180.90	166.56	153.34	138.32	127.29	115.59	104.68	95.12	87.41
270.0	193.39	179.72	159.92	147.32	137.42	124.76	112.84	104.85	94.73
315.0	197.44	180.45	166.39	151.65	138.43	127.69	117.06	105.36	97.03
360.0	217.86	198.56	180.73	166.56	152.27	140.91	129.15	117.11	107.83

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	98.55	89.83	82.80	76.11	67.95	61.82	56.08	50.29	45.28
45.0	96.58	88.93	81.00	74.19	66.94	60.02	54.39	49.22	43.48
90.0	91.69	83.48	75.83	69.30	62.38	56.08	50.91	45.45	41.06
135.0	87.41	79.59	73.13	66.94	60.24	54.17	49.11	44.44	39.26
180.0	80.44	73.18	66.32	60.41	53.66	48.83	44.38	39.66	35.89
225.0	79.59	73.13	66.09	59.63	54.28	48.66	43.20	39.71	36.06
270.0	86.57	80.61	72.62	66.60	60.69	53.83	48.94	44.61	39.60
315.0	89.33	81.45	74.08	67.95	61.37	55.07	50.01	45.00	40.89
360.0	98.55	89.83	82.80	76.11	67.95	61.82	56.08	50.29	45.28
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	41.06	36.84	33.02	29.98	26.89	24.41	21.94	19.97	18.84
45.0	39.26	35.49	31.28	28.35	25.76	23.23	20.93	19.46	18.45
90.0	36.68	32.74	29.59	26.83	23.79	21.60	19.80	18.45	17.66
135.0	35.49	32.12	28.35	25.82	23.57	21.32	19.52	18.51	17.72
180.0	32.12	28.74	26.04	23.63	21.04	19.41	18.34	17.49	16.93
225.0	31.95	28.91	26.27	23.51	21.21	19.58	18.28	17.49	16.88
270.0	36.00	32.74	29.03	26.38	23.96	21.66	19.69	18.56	17.78
315.0	36.68	32.91	29.93	27.17	24.19	22.05	20.36	19.01	18.23
360.0	41.06	36.84	33.02	29.98	26.89	24.41	21.94	19.97	18.84
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	18.06	17.33	16.82	16.31	15.75	15.36	14.91	14.51	14.06
45.0	17.72	17.04	16.43	15.98	15.47	15.02	14.63	14.23	13.84
90.0	17.04	16.43	15.86	15.47	15.02	14.57	14.18	13.78	13.44
135.0	17.10	16.48	15.98	15.53	15.02	14.57	14.18	13.89	13.33
180.0	16.37	15.81	15.36	14.96	14.51	14.23	13.78	13.39	13.05
225.0	16.31	15.86	15.41	14.96	14.57	14.23	13.78	13.44	13.11
270.0	17.16	16.59	16.03	15.69	15.19	14.79	14.40	14.06	13.61
315.0	17.61	16.99	16.48	15.98	15.47	15.08	14.63	14.18	13.84
360.0	18.06	17.33	16.82	16.31	15.75	15.36	14.91	14.51	14.06
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	13.67	13.22	12.88	12.54	12.04	11.70	11.36	10.80	10.46
45.0	13.44	13.11	12.66	12.26	11.87	11.42	11.03	10.52	10.13
90.0	12.99	12.60	12.26	11.87	11.36	11.03	10.58	10.13	9.73
135.0	12.99	12.66	12.15	11.70	11.36	10.91	10.46	10.07	9.62
180.0	12.66	12.26	11.87	11.53	10.97	10.58	10.18	9.84	9.34
225.0	12.71	12.38	11.98	11.59	11.19	10.69	10.29	9.96	9.51
270.0	13.16	12.88	12.49	12.04	11.70	11.31	10.74	10.41	10.07
315.0	13.39	12.99	12.66	12.21	11.81	11.42	10.97	10.58	10.18
360.0	13.67	13.22	12.88	12.54	12.04	11.70	11.36	10.80	10.46
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	10.07	9.62	9.34	8.94	8.55	8.10	7.71	7.26	6.98
45.0	9.73	9.34	9.00	8.55	8.21	7.82	7.43	7.14	6.81
90.0	9.28	8.89	8.55	8.16	7.76	7.43	7.09	6.86	6.64
135.0	9.23	8.78	8.44	8.10	7.71	7.37	7.09	6.81	6.64
180.0	9.00	8.66	8.21	7.88	7.54	7.14	6.86	6.69	6.64
225.0	9.17	8.83	8.38	8.04	7.71	7.37	6.98	6.75	6.64
270.0	9.62	9.23	8.83	8.44	8.04	7.59	7.26	6.92	6.69
315.0	9.73	9.39	9.00	8.61	8.21	7.82	7.37	7.09	6.75
360.0	10.07	9.62	9.34	8.94	8.55	8.10	7.71	7.26	6.98

Intensity data(cd)

C/γ(°)	90.0
0.0	6.75
45.0	6.64
90.0	6.64
135.0	6.58
180.0	6.64
225.0	6.64
270.0	6.58
315.0	6.58
360.0	6.75