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NT

Client:

LumCAT: 3-2808-L

Luminaire: 92.70.411.00

Report No: 2024424-B022

Ballast type: AC

Test No: 2024424-C022

Voltage(V): 36.310

LampCAT: NICHIA NFCWJ130B-V3

Current(A): 0.576

Lamp flux(lm): 2924.0

Power (W): 20.914

Number of Lamps: 1

PF: 0.000

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 2425.30, Efficiency(%): 82.94% , Luminous Efficacy(lm/W): 115.97

Central intensity(cd): 4589.979, Maximum intensity(cd): 4589.979

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=42.8

[C90/270]Total=42.8

Field angle(10%Imax): [C0/180]Total=66.2

[C90/270]Total=66.2

Maximum s/h(1/2): C0_180=0.69 C90_270=0.69

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(%): 82.94%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.265%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/24
Humidity(%): 60.0%

Operator: NT07
Distance(m): 7.65

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	4589.978	0.000	0	0.00%	0.00%
1.0	4586.247	4.391	4.391	0.15%	0.18%
2.0	4571.763	13.144	17.535	0.45%	0.72%
3.0	4546.379	21.808	39.343	0.75%	1.62%
4.0	4514.630	30.330	69.673	1.04%	2.87%
5.0	4475.055	38.673	108.346	1.32%	4.47%
6.0	4425.384	46.774	155.12	1.60%	6.40%
7.0	4366.569	54.571	209.692	1.87%	8.65%
8.0	4296.561	62.000	271.692	2.12%	11.20%
9.0	4208.119	68.926	340.618	2.36%	14.04%
10.0	4109.362	75.270	415.888	2.57%	17.15%
11.0	3994.951	80.979	496.867	2.77%	20.49%
12.0	3868.908	85.963	582.83	2.94%	24.03%
13.0	3737.817	90.273	673.103	3.09%	27.75%
14.0	3587.195	93.760	766.862	3.21%	31.62%
15.0	3429.623	96.330	863.192	3.29%	35.59%
16.0	3267.370	98.130	961.322	3.36%	39.64%
17.0	3108.701	99.293	1060.614	3.40%	43.73%
18.0	2924.794	99.479	1160.094	3.40%	47.83%
19.0	2742.569	98.601	1258.694	3.37%	51.90%
20.0	2545.202	96.781	1355.475	3.31%	55.89%
21.0	2365.319	94.292	1449.767	3.22%	59.78%
22.0	2171.902	91.177	1540.944	3.12%	63.54%
23.0	1996.480	87.464	1628.408	2.99%	67.14%
24.0	1822.230	83.491	1711.899	2.86%	70.59%
25.0	1623.407	78.346	1790.245	2.68%	73.82%
26.0	1444.299	72.414	1862.659	2.48%	76.80%
27.0	1252.360	65.974	1928.633	2.26%	79.52%
28.0	1142.271	60.627	1989.26	2.07%	82.02%
29.0	992.776	55.859	2045.119	1.91%	84.32%
30.0	853.097	49.838	2094.957	1.70%	86.38%
31.0	708.225	43.449	2138.406	1.49%	88.17%
32.0	586.154	37.082	2175.489	1.27%	89.70%
33.0	467.463	31.040	2206.529	1.06%	90.98%
34.0	363.739	25.155	2231.684	0.86%	92.02%
35.0	285.721	20.170	2251.853	0.69%	92.85%
36.0	218.911	16.068	2267.921	0.55%	93.51%
37.0	131.595	11.432	2279.352	0.39%	93.98%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	108.669	8.020	2287.372	0.27%	94.31%
39.0	72.495	6.184	2293.556	0.21%	94.57%
40.0	62.685	4.715	2298.27	0.16%	94.76%
41.0	56.899	4.258	2302.529	0.15%	94.94%
42.0	51.946	3.955	2306.483	0.14%	95.10%
43.0	48.618	3.725	2310.208	0.13%	95.25%
44.0	45.509	3.553	2313.761	0.12%	95.40%
45.0	42.692	3.390	2317.151	0.12%	95.54%
46.0	40.337	3.247	2320.398	0.11%	95.67%
47.0	38.310	3.128	2323.526	0.11%	95.80%
48.0	36.496	3.024	2326.55	0.10%	95.93%
49.0	34.792	2.927	2329.477	0.10%	96.05%
50.0	33.402	2.843	2332.32	0.10%	96.17%
51.0	32.202	2.776	2335.096	0.09%	96.28%
52.0	31.171	2.719	2337.815	0.09%	96.39%
53.0	30.263	2.672	2340.488	0.09%	96.50%
54.0	29.576	2.637	2343.125	0.09%	96.61%
55.0	29.013	2.615	2345.741	0.09%	96.72%
56.0	28.647	2.605	2348.346	0.09%	96.83%
57.0	28.493	2.613	2350.959	0.09%	96.93%
58.0	28.493	2.635	2353.594	0.09%	97.04%
59.0	28.544	2.667	2356.26	0.09%	97.15%
60.0	28.566	2.698	2358.958	0.09%	97.26%
61.0	28.537	2.725	2361.684	0.09%	97.38%
62.0	28.442	2.746	2364.429	0.09%	97.49%
63.0	28.244	2.757	2367.186	0.09%	97.60%
64.0	27.901	2.755	2369.941	0.09%	97.72%
65.0	27.410	2.737	2372.678	0.09%	97.83%
66.0	26.672	2.698	2375.377	0.09%	97.94%
67.0	25.830	2.640	2378.017	0.09%	98.05%
68.0	24.989	2.574	2380.591	0.09%	98.16%
69.0	24.455	2.522	2383.113	0.09%	98.26%
70.0	24.162	2.497	2385.61	0.09%	98.36%
71.0	24.162	2.498	2388.108	0.09%	98.47%
72.0	24.448	2.528	2390.636	0.09%	98.57%
73.0	24.784	2.574	2393.21	0.09%	98.68%
74.0	25.033	2.619	2395.829	0.09%	98.78%
75.0	25.143	2.651	2398.48	0.09%	98.89%

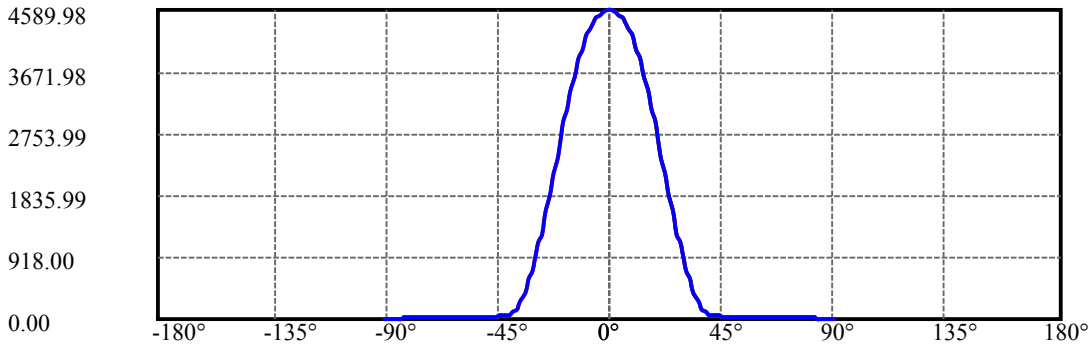
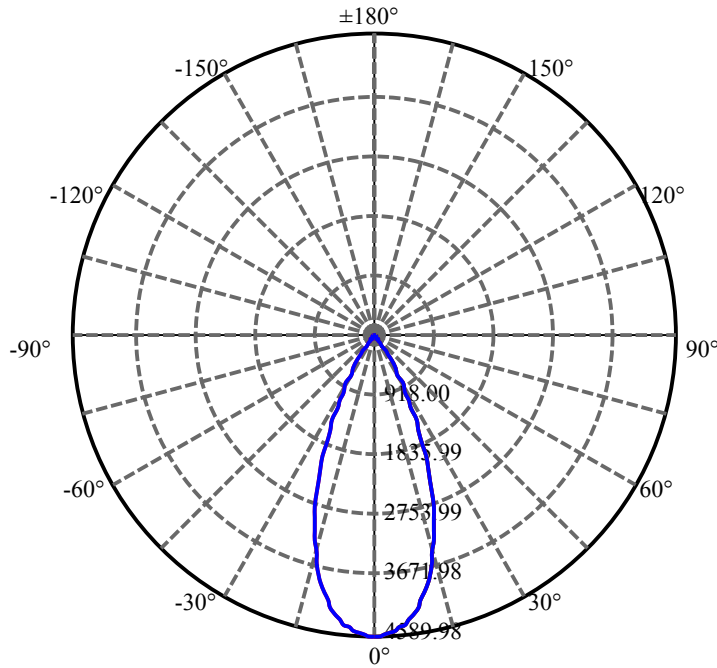
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	24.982	2.661	2401.141	0.09%	99.00%
77.0	24.572	2.642	2403.783	0.09%	99.11%
78.0	23.848	2.592	2406.375	0.09%	99.22%
79.0	22.612	2.496	2408.871	0.09%	99.32%
80.0	20.958	2.349	2411.22	0.08%	99.42%
81.0	18.259	2.121	2413.341	0.07%	99.51%
82.0	15.494	1.830	2415.171	0.06%	99.58%
83.0	13.387	1.570	2416.741	0.05%	99.65%
84.0	12.253	1.397	2418.138	0.05%	99.70%
85.0	11.631	1.304	2419.442	0.04%	99.76%
86.0	11.002	1.237	2420.679	0.04%	99.81%
87.0	10.695	1.187	2421.866	0.04%	99.86%
88.0	10.468	1.159	2423.026	0.04%	99.91%
89.0	10.344	1.141	2424.166	0.04%	99.95%
90.0	10.300	1.132	2425.298	0.04%	100.00%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	2094.96	71.65%	86.38%
0-40	2298.27	78.60%	94.76%
0-60	2358.96	80.68%	97.26%
0-90	2424.17	82.91%	99.95%
0-120	2424.17	82.91%	99.95%
0-180	2425.30	82.94%	100.00%
60-90	65.21	2.23%	2.69%
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%
0-27.19	1940.24	66.36%	80.00%

ZONAL LUMEN SUMMARY

0-10	415.89
10-20	939.59
20-30	739.48
30-40	203.31
40-50	34.05
50-60	26.64
60-70	26.65
70-80	25.61
80-90	12.95
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: —————

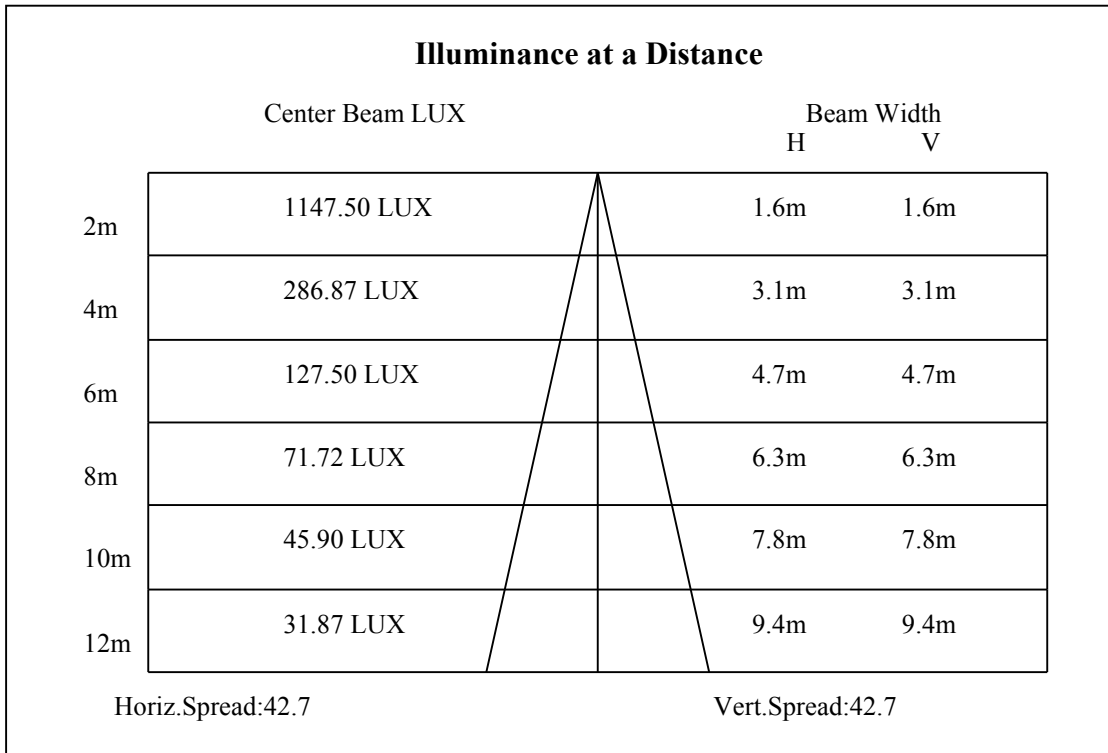
C90/C270: —————

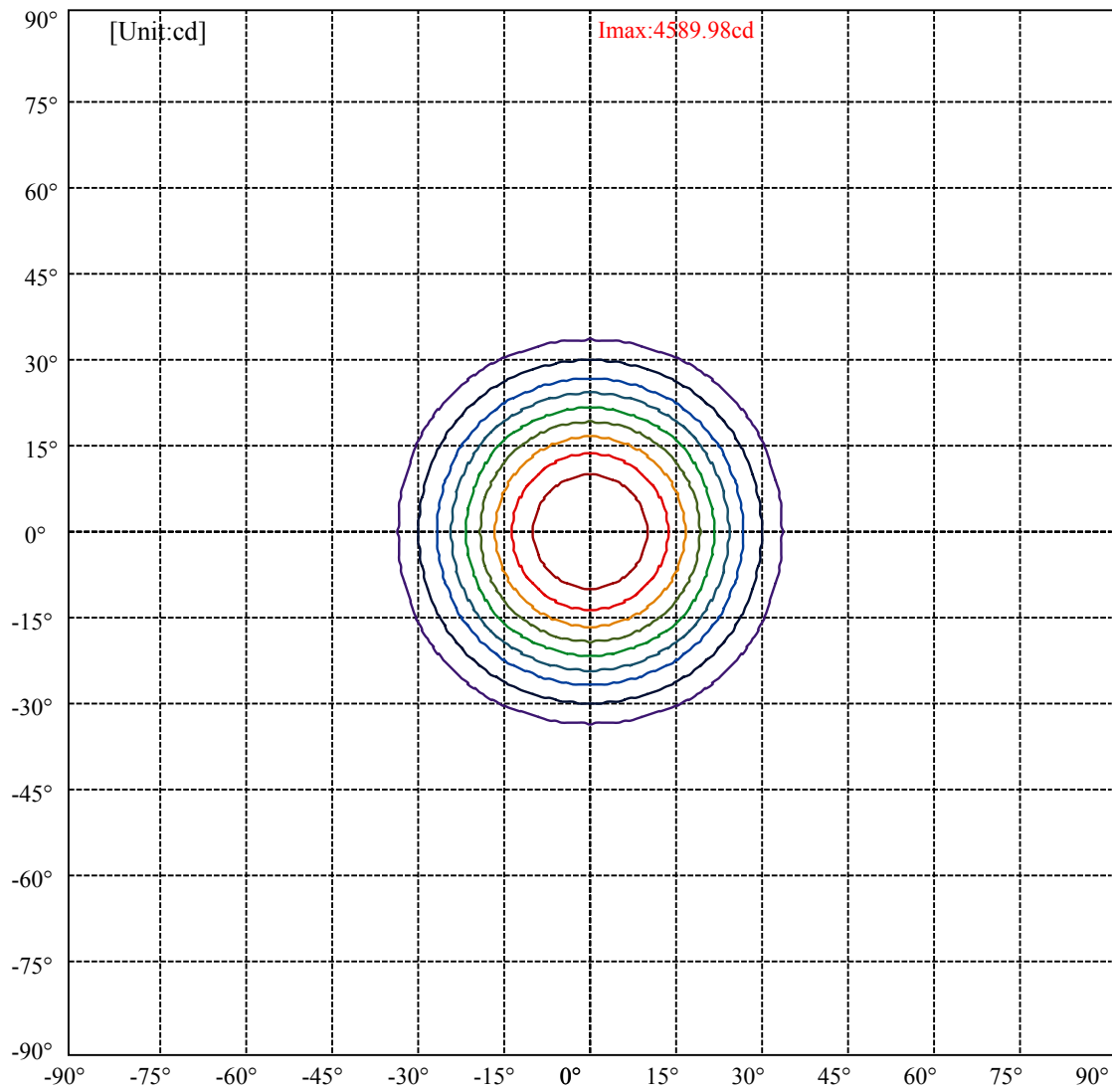
Field angle(10%Imax):C0/180Left:33.1 Right:33.1

:C90/270Left:33.1 Right:33.1

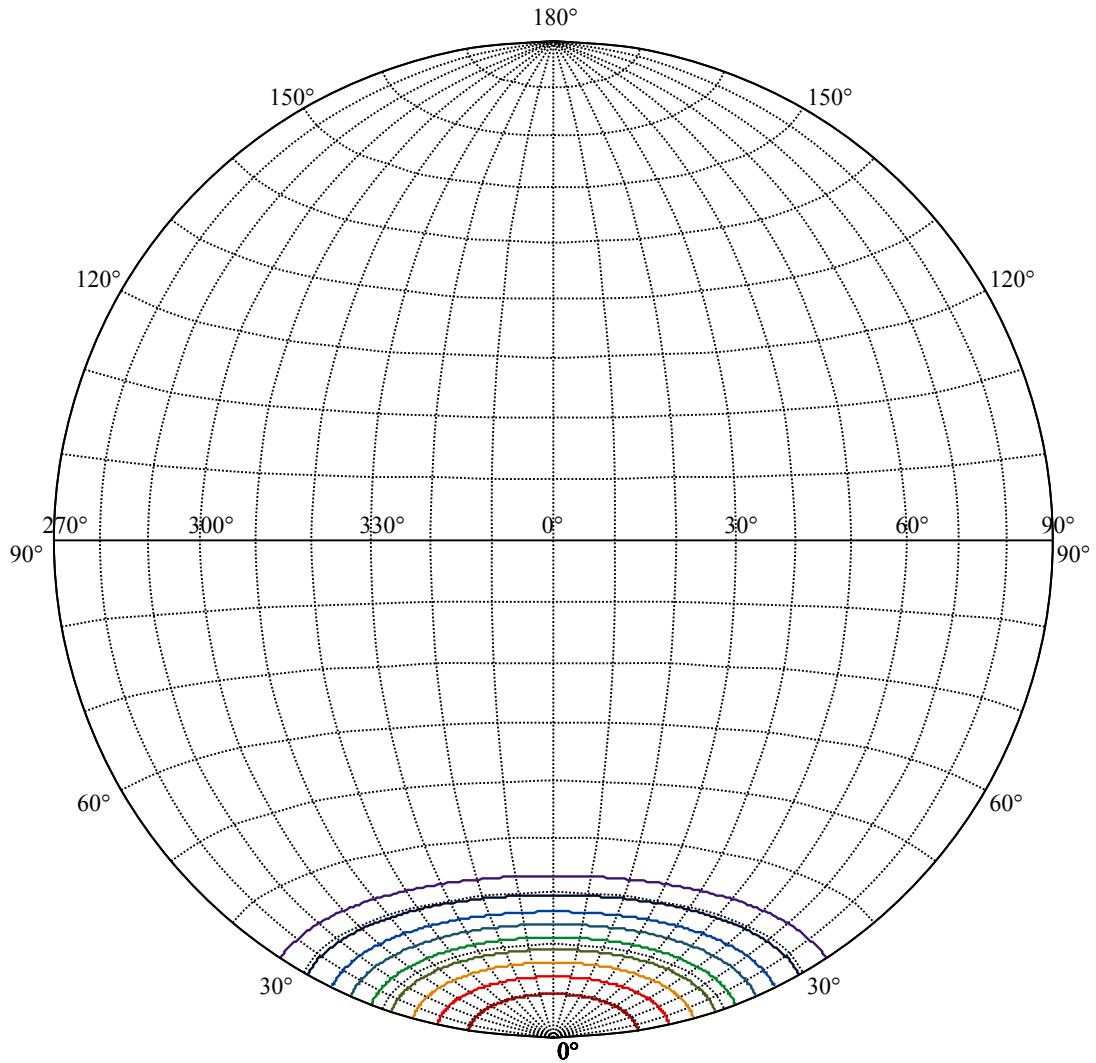
Beam Angle(50%Imax):C0/180Left:21.4 Right:21.4

:C90/270Left:21.4 Right:21.4





(10%Imax) 458.998	—
(20%Imax) 917.996	—
(30%Imax) 1376.99	—
(40%Imax) 1835.99	—
(50%Imax) 2294.99	—
(60%Imax) 2753.99	—
(70%Imax) 3212.98	—
(80%Imax) 3671.98	—
(90%Imax) 4130.98	—



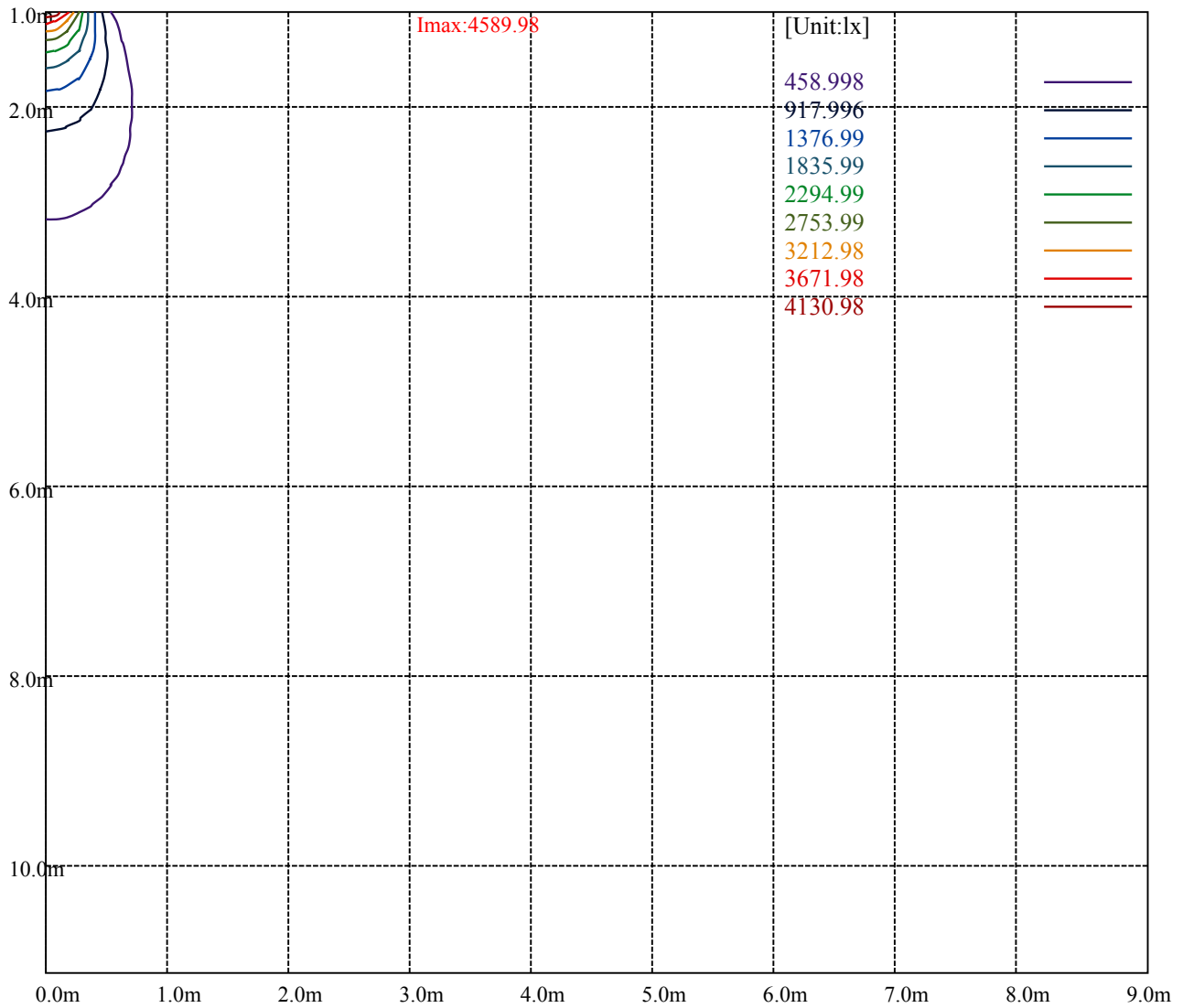
House

[Unit:cd]

Road

Imax:4589.98

(10%Imax) 458.998	—
(20%Imax) 917.996	—
(30%Imax) 1376.99	—
(40%Imax) 1835.99	—
(50%Imax) 2294.99	—
(60%Imax) 2753.99	—
(70%Imax) 3212.98	—
(80%Imax) 3671.98	—
(90%Imax) 4130.98	—



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

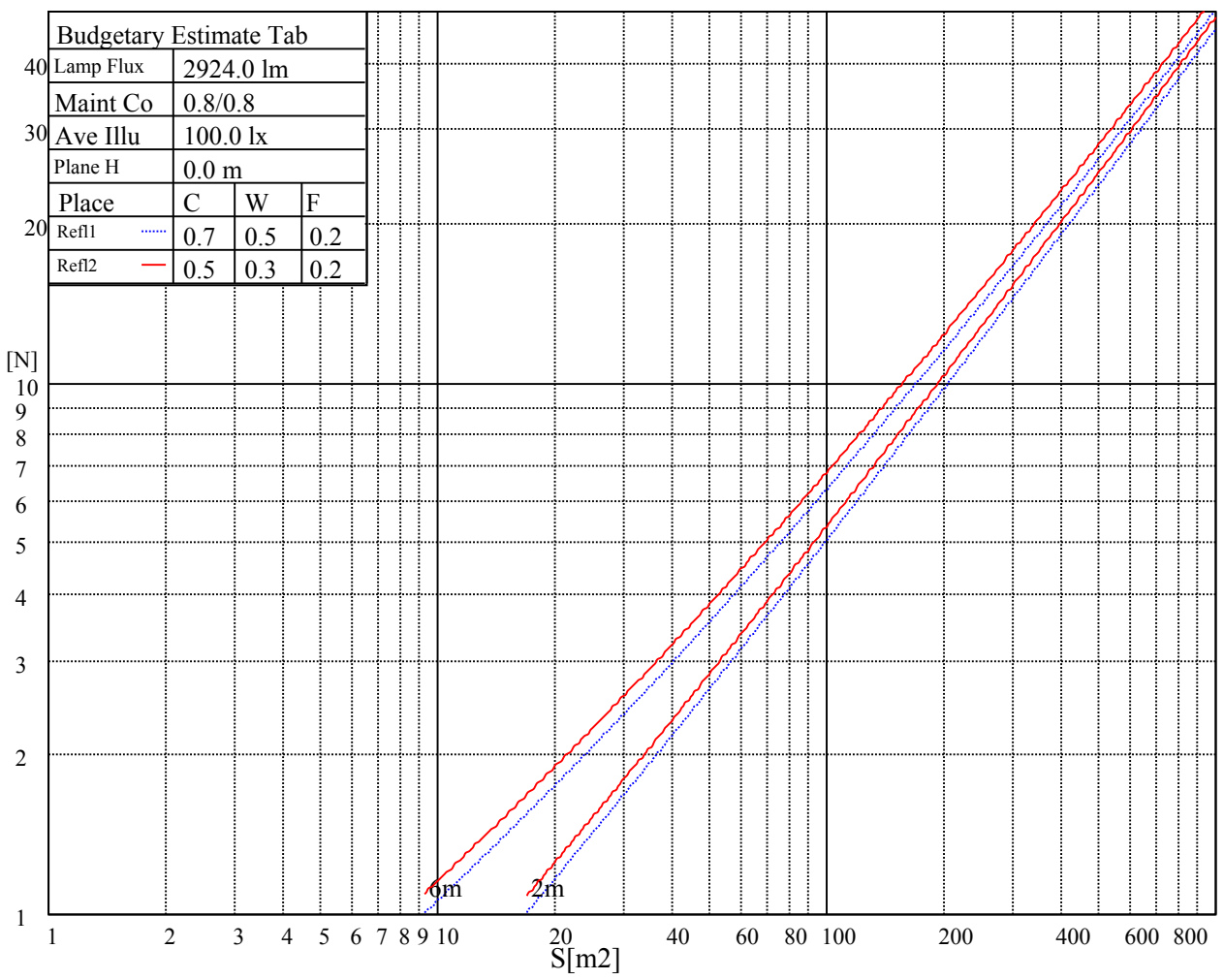
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

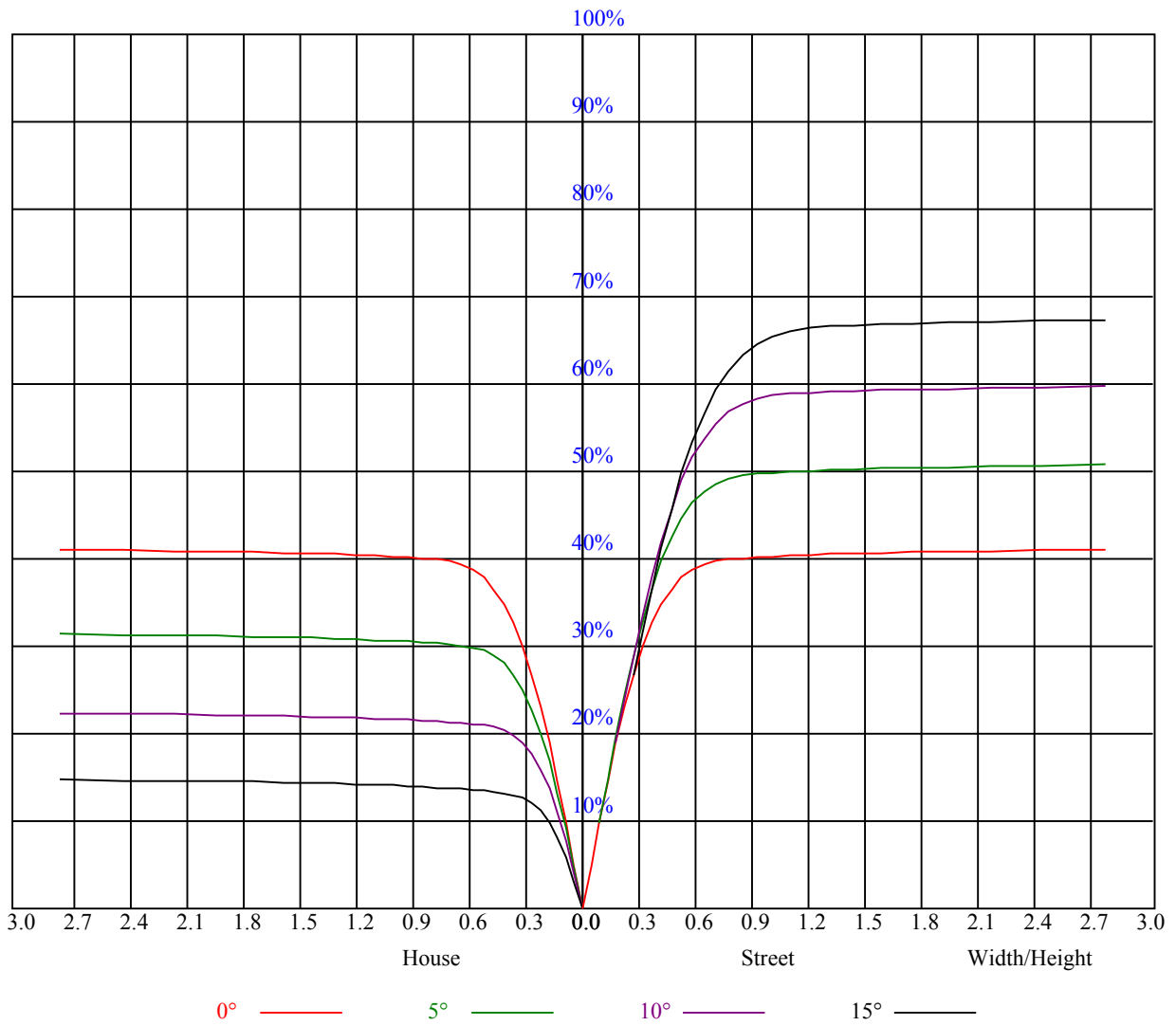
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

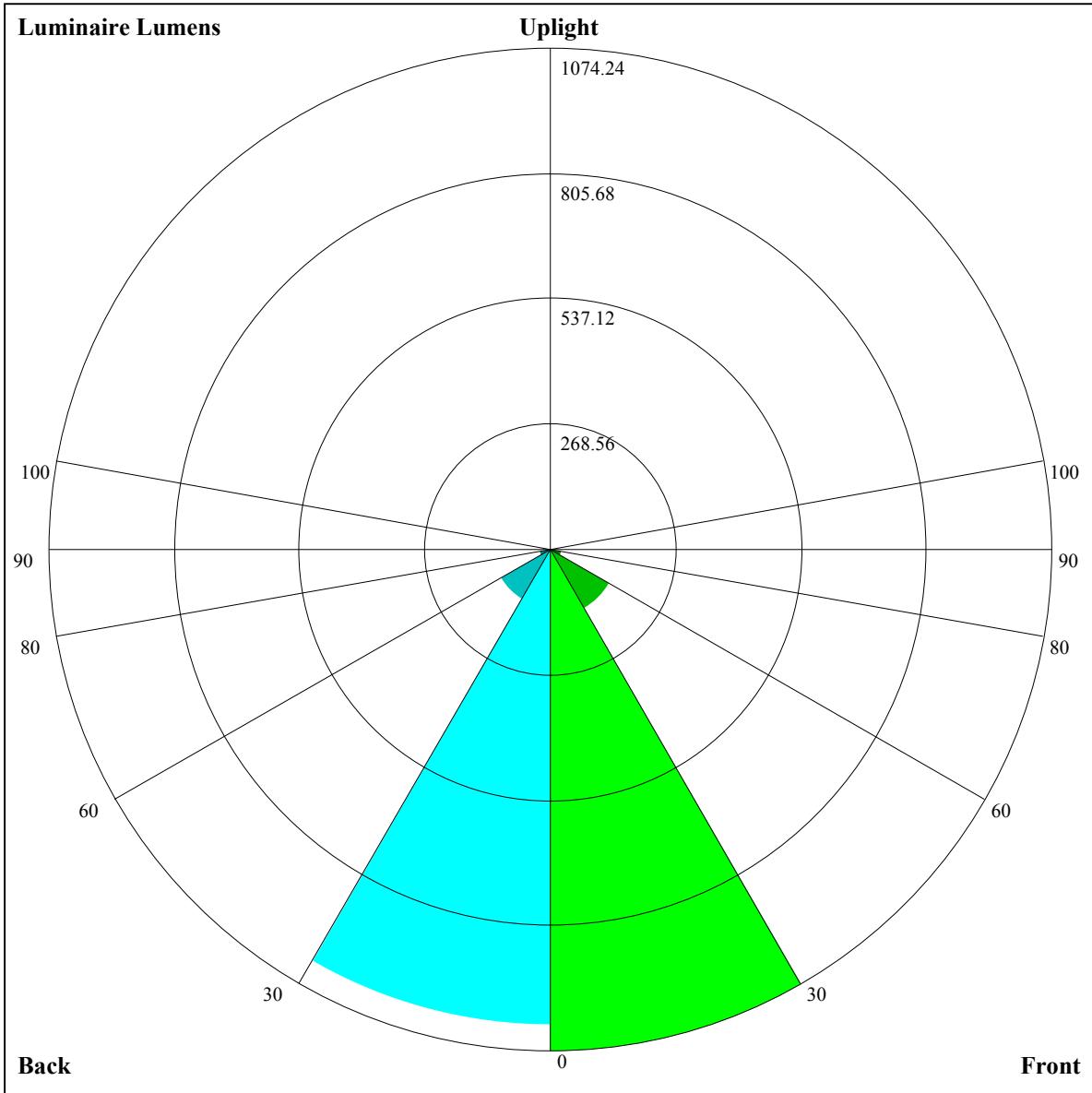
Luminance Limiting Curve





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 RHOF=20 CU															
0	0.99	0.99	0.99	0.96	0.96	0.96	0.92	0.92	0.92	0.88	0.88	0.88	0.85	0.85	0.85	0.83
1	0.92	0.90	0.88	0.90	0.89	0.87	0.87	0.86	0.84	0.84	0.83	0.82	0.81	0.80	0.79	0.78
2	0.86	0.83	0.81	0.85	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.76	0.78	0.76	0.75	0.73
3	0.81	0.78	0.75	0.80	0.77	0.74	0.78	0.75	0.73	0.76	0.74	0.72	0.74	0.72	0.71	0.69
4	0.77	0.73	0.70	0.76	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.71	0.69	0.67	0.66
5	0.73	0.69	0.66	0.72	0.68	0.65	0.71	0.67	0.65	0.70	0.67	0.64	0.68	0.66	0.64	0.62
6	0.69	0.65	0.62	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.63	0.61	0.66	0.63	0.61	0.59
7	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.64	0.60	0.58	0.63	0.60	0.58	0.57
8	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.54
9	0.60	0.56	0.53	0.60	0.56	0.53	0.59	0.56	0.53	0.59	0.55	0.53	0.58	0.55	0.53	0.52
10	0.58	0.54	0.51	0.58	0.54	0.51	0.57	0.53	0.51	0.56	0.53	0.51	0.56	0.53	0.50	0.50





Luminaire Lumens:

FL=1074.24,FM=144.31,FH=25.57,FVH=7.1

BL=1018.42,BM=123.53,BH=26.28,BVH=7.08

UL=0,UH=0

BUG Rating:B3-U0-G0

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	4598.76	4605.78	4602.27	4583.54	4557.21	4522.68	4481.71	4412.66	4359.98
45.0	4577.69	4594.07	4595.25	4598.76	4584.13	4564.81	4532.04	4489.90	4438.40
90.0	4591.15	4587.05	4575.35	4551.94	4525.60	4478.79	4437.82	4371.69	4316.68
135.0	4592.32	4586.47	4578.27	4547.26	4518.58	4481.71	4427.29	4376.37	4300.29
180.0	4598.76	4591.15	4568.32	4535.55	4497.51	4454.79	4391.00	4333.65	4248.79
225.0	4577.69	4554.86	4519.17	4483.47	4433.14	4364.67	4301.46	4225.97	4140.53
270.0	4591.15	4581.79	4568.91	4528.53	4493.42	4463.57	4416.17	4362.33	4278.64
315.0	4592.32	4588.81	4566.57	4541.99	4507.46	4469.42	4415.58	4359.98	4289.17
360.0	4598.76	4605.78	4602.27	4583.54	4557.21	4522.68	4481.71	4412.66	4359.98
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	4265.18	4175.64	4081.42	3942.72	3812.80	3677.03	3535.99	3344.03	3184.27
45.0	4367.59	4299.12	4224.80	4109.51	4003.58	3877.17	3712.14	3575.20	3425.97
90.0	4240.01	4151.06	4020.55	3909.36	3780.61	3645.43	3468.69	3318.87	3168.47
135.0	4228.31	4141.70	4039.28	3897.07	3773.59	3646.60	3466.93	3312.43	3153.84
180.0	4158.08	4062.11	3917.55	3789.39	3658.30	3482.73	3333.50	3180.17	3017.48
225.0	4015.87	3863.71	3732.04	3600.95	3464.59	3272.05	3116.38	2948.42	2779.29
270.0	4201.39	4087.27	3984.86	3864.88	3701.61	3562.32	3420.11	3231.09	3077.17
315.0	4188.31	4094.29	3959.11	3837.38	3707.46	3534.23	3383.24	3228.74	3063.13
360.0	4265.18	4175.64	4081.42	3942.72	3812.80	3677.03	3535.99	3344.03	3184.27
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	3022.16	2853.03	2637.67	2456.83	2277.17	2072.93	1908.48	1711.84	1546.22
45.0	3273.81	3115.80	2912.14	2738.91	2556.32	2336.28	2165.98	1962.90	1797.87
90.0	3001.68	2795.09	2614.26	2391.87	2216.31	2049.52	1842.35	1690.19	1534.52
135.0	2988.22	2811.48	2600.80	2422.89	2212.79	2047.76	1890.34	1694.28	1532.18
180.0	2805.04	2616.01	2428.74	2260.78	2048.93	1886.24	1697.21	1537.44	1367.14
225.0	2551.64	2366.71	2196.99	2031.96	1826.55	1673.80	1523.40	1141.31	1141.31
270.0	2910.97	2719.01	2488.44	2318.13	2146.08	1974.61	1778.56	1626.40	1470.73
315.0	2844.84	2663.42	2482.58	2301.16	2091.07	1930.72	1771.53	1622.89	1164.42
360.0	3022.16	2853.03	2637.67	2456.83	2277.17	2072.93	1908.48	1711.84	1546.22
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1149.56	1149.56	1041.52	897.15	764.42	641.64	526.06	395.61	299.87
45.0	1633.42	1473.07	1277.02	1117.84	974.46	840.44	677.75	559.53	450.10
90.0	1151.14	1151.14	1044.10	897.79	732.70	610.21	493.34	388.12	271.02
135.0	1373.00	1180.46	1034.15	896.04	763.78	637.95	493.40	388.06	295.01
180.0	1220.25	1044.10	894.87	761.44	605.18	498.08	397.43	302.03	302.03
225.0	1034.85	868.65	738.50	615.01	473.15	372.67	282.96	201.73	121.08
270.0	1292.24	1141.83	966.26	831.08	702.91	552.51	439.56	340.66	316.67
315.0	1164.42	1129.37	945.78	808.43	649.19	535.71	429.20	334.16	229.99
360.0	1149.56	1149.56	1041.52	897.15	764.42	641.64	526.06	395.61	299.87
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	218.23	138.17	94.92	73.97	65.31	59.28	53.72	50.27	47.23
45.0	349.44	303.79	303.79	103.99	76.25	66.72	58.93	54.19	50.62
90.0	188.91	109.79	82.58	71.57	62.09	56.77	52.67	49.28	45.59
135.0	295.01	123.89	88.13	72.28	64.37	58.64	53.26	49.92	47.05
180.0	137.82	95.86	76.61	65.14	58.93	54.19	49.69	46.76	43.54
225.0	84.86	71.34	62.68	55.83	51.73	48.46	45.00	42.60	40.32
270.0	316.67	102.36	79.18	68.82	61.27	54.95	51.03	47.75	44.30
315.0	160.35	107.56	81.46	68.35	61.51	56.18	51.27	48.16	45.41
360.0	218.23	138.17	94.92	73.97	65.31	59.28	53.72	50.27	47.23

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	43.89	41.49	39.39	37.57	35.52	34.06	32.83	31.72	30.61
45.0	47.52	44.24	41.90	39.80	37.81	35.64	34.12	32.89	31.49
90.0	42.96	40.67	38.68	36.52	34.94	33.53	32.42	31.13	30.37
135.0	43.77	41.49	39.50	37.75	35.64	34.24	33.07	32.07	31.08
180.0	41.14	39.09	36.99	35.35	33.88	32.66	31.37	30.55	29.79
225.0	37.86	36.17	34.24	33.01	31.89	30.90	29.85	29.14	28.56
270.0	41.90	39.21	37.40	35.70	33.83	32.66	31.60	30.61	29.73
315.0	42.49	40.32	38.39	36.28	34.82	33.53	32.36	31.25	30.49
360.0	43.89	41.49	39.39	37.57	35.52	34.06	32.83	31.72	30.61
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	29.96	29.38	28.91	28.85	28.97	29.09	29.09	28.97	28.79
45.0	30.55	29.79	28.97	28.44	28.21	28.21	28.38	28.56	28.68
90.0	29.50	28.97	28.56	28.32	28.38	28.44	28.44	28.38	28.27
135.0	30.37	29.61	29.32	29.14	29.03	28.97	28.97	28.97	28.85
180.0	29.14	28.50	28.15	27.97	27.97	28.09	28.21	28.32	28.38
225.0	28.21	27.97	28.03	28.15	28.21	28.27	28.21	28.03	27.74
270.0	29.14	28.62	28.32	28.27	28.38	28.56	28.56	28.56	28.50
315.0	29.73	29.26	28.91	28.79	28.79	28.73	28.68	28.50	28.32
360.0	29.96	29.38	28.91	28.85	28.97	29.09	29.09	28.97	28.79
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	28.50	28.15	27.62	26.92	25.75	25.28	25.05	25.63	26.39
45.0	28.73	28.68	28.38	27.86	27.10	26.16	25.05	23.53	22.65
90.0	27.97	27.56	26.86	26.10	25.22	23.64	22.77	22.12	21.48
135.0	28.68	28.44	27.92	27.04	26.28	25.52	25.05	24.99	25.05
180.0	28.38	28.68	28.97	29.32	29.44	29.96	30.72	31.60	32.54
225.0	27.21	26.10	25.11	23.64	22.59	21.65	20.89	20.25	19.78
270.0	28.27	27.86	27.33	26.28	25.11	23.94	23.06	22.47	22.59
315.0	28.21	27.74	27.10	26.22	25.16	23.76	23.06	22.71	22.82
360.0	28.50	28.15	27.62	26.92	25.75	25.28	25.05	25.63	26.39
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	27.04	26.98	26.51	25.75	24.87	24.05	23.06	21.65	20.42
45.0	21.77	21.19	20.66	20.19	19.84	19.43	19.08	18.49	17.91
90.0	21.71	22.59	23.12	23.64	23.82	23.94	23.41	22.00	20.31
135.0	25.22	25.93	26.80	27.86	28.38	28.44	27.86	26.34	24.40
180.0	33.71	34.18	34.00	33.42	32.60	31.37	30.14	28.79	27.15
225.0	19.31	19.02	18.79	18.43	18.02	17.50	17.03	16.39	15.16
270.0	22.94	23.47	24.40	24.93	25.05	24.93	24.52	23.23	21.01
315.0	23.88	24.93	25.98	26.92	27.27	26.92	25.69	23.99	21.30
360.0	27.04	26.98	26.51	25.75	24.87	24.05	23.06	21.65	20.42
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	18.79	15.92	13.87	12.64	11.88	11.35	10.89	10.65	10.42
45.0	17.21	16.62	15.45	13.64	12.47	11.65	11.12	10.83	10.59
90.0	17.67	14.57	12.76	11.94	11.41	11.00	10.77	10.53	10.36
135.0	20.72	17.32	13.87	12.41	11.70	10.89	10.65	10.42	10.30
180.0	23.99	18.14	13.75	12.06	11.47	10.71	10.48	10.24	10.30
225.0	13.40	12.52	11.82	11.47	10.83	10.48	10.30	10.24	10.24
270.0	16.91	14.10	12.64	12.00	11.76	11.00	10.65	10.42	10.24
315.0	17.38	14.75	12.93	11.88	11.53	10.94	10.71	10.42	10.30
360.0	18.79	15.92	13.87	12.64	11.88	11.35	10.89	10.65	10.42

Intensity data(cd)

C/ γ (°)	90.0
0.0	10.30
45.0	10.42
90.0	10.30
135.0	10.30
180.0	10.24
225.0	10.24
270.0	10.30
315.0	10.30
360.0	10.30