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Nata

Client:

LumCAT: 3-1545-A3

Luminaire: 99.02.73.172+92.76.365.00

Report No:

Voltage(V): 34.0200

Test No: GC20190823010

Current(A): 0.4480

LampCAT: TRIDONIC SLE 15MM G7

Power (W): 15.2400

Lamp flux(lm): 2050.0

PF: 0.0000

Number of Lamps: 1

Ballast type: DC

Length(mm): 84

Width(mm): 84

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1712.92, Efficiency(%): 83.56% , Luminous Efficacy(lm/W): 112.40

Central intensity(cd): 14142.660, Maximum intensity(cd): 14142.660

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=14.0

[C90/270]Total=14.0

Field angle(10%Imax): [C0/180]Total=27.8

[C90/270]Total=27.8

Maximum s/h(1/2): C0_180=0.24 C90_270=0.24

Maximum s/h(1/4): C0_180=0.24 C90_270=0.24

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.56%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.556%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2019/8/24
Humidity(%): 65.0%

Operator: NT07
Distance(m): 7.50

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	14142.656	0.000	0	.000%	.000%
1.0	14023.125	13.477	13.477	.657%	.787%
2.0	13622.344	39.679	53.156	1.936%	3.103%
3.0	12817.969	63.237	116.393	3.085%	6.795%
4.0	11600.648	81.737	198.13	3.987%	11.567%
5.0	10245.234	93.980	292.11	4.584%	17.053%
6.0	8804.180	100.110	392.219	4.883%	22.898%
7.0	7116.398	98.819	491.038	4.820%	28.667%
8.0	5678.789	91.573	582.611	4.467%	34.013%
9.0	4295.039	80.832	663.443	3.943%	38.732%
10.0	3316.008	68.877	732.32	3.360%	42.753%
11.0	2634.539	59.458	791.779	2.900%	46.224%
12.0	2116.125	51.932	843.71	2.533%	49.256%
13.0	1688.625	45.153	888.863	2.203%	51.892%
14.0	1378.751	39.262	928.125	1.915%	54.184%
15.0	1218.727	35.659	963.784	1.739%	56.266%
16.0	1060.453	33.396	997.181	1.629%	58.215%
17.0	983.918	31.836	1029.017	1.553%	60.074%
18.0	909.914	31.225	1060.242	1.523%	61.897%
19.0	858.459	30.766	1091.008	1.501%	63.693%
20.0	816.982	30.665	1121.674	1.496%	65.483%
21.0	787.303	30.806	1152.479	1.503%	67.282%
22.0	765.063	31.195	1183.675	1.522%	69.103%
23.0	744.279	31.670	1215.345	1.545%	70.952%
24.0	725.386	32.132	1247.477	1.567%	72.827%
25.0	706.711	32.563	1280.039	1.588%	74.728%
26.0	688.542	32.935	1312.975	1.607%	76.651%
27.0	670.830	33.257	1346.232	1.622%	78.593%
28.0	654.335	33.550	1379.782	1.637%	80.551%
29.0	636.659	33.776	1413.558	1.648%	82.523%
30.0	620.290	33.937	1447.496	1.655%	84.505%
31.0	599.140	33.935	1481.431	1.655%	86.486%
32.0	563.695	33.314	1514.745	1.625%	88.430%
33.0	516.614	31.826	1546.571	1.553%	90.289%
34.0	447.785	29.186	1575.756	1.424%	91.992%
35.0	377.072	25.617	1601.373	1.250%	93.488%
36.0	312.968	21.971	1623.344	1.072%	94.771%
37.0	230.161	17.714	1641.058	.864%	95.805%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	154.603	12.843	1653.901	.626%	96.554%
39.0	93.881	8.481	1662.383	.414%	97.050%
40.0	52.615	5.109	1667.492	.249%	97.348%
41.0	29.524	2.925	1670.417	.143%	97.519%
42.0	22.099	1.876	1672.292	.091%	97.628%
43.0	17.993	1.485	1673.778	.072%	97.715%
44.0	14.871	1.240	1675.018	.061%	97.787%
45.0	12.263	1.043	1676.061	.051%	97.848%
46.0	10.800	0.902	1676.963	.044%	97.901%
47.0	10.216	0.836	1677.798	.041%	97.950%
48.0	9.998	0.817	1678.616	.040%	97.997%
49.0	9.766	0.812	1679.427	.040%	98.045%
50.0	9.577	0.806	1680.234	.039%	98.092%
51.0	9.422	0.804	1681.038	.039%	98.139%
52.0	9.253	0.801	1681.839	.039%	98.185%
53.0	9.098	0.798	1682.637	.039%	98.232%
54.0	8.958	0.796	1683.433	.039%	98.278%
55.0	8.817	0.793	1684.227	.039%	98.325%
56.0	8.698	0.791	1685.018	.039%	98.371%
57.0	8.592	0.791	1685.809	.039%	98.417%
58.0	8.501	0.790	1686.599	.039%	98.463%
59.0	8.416	0.791	1687.39	.039%	98.509%
60.0	8.339	0.792	1688.181	.039%	98.556%
61.0	8.262	0.792	1688.974	.039%	98.602%
62.0	8.198	0.793	1689.767	.039%	98.648%
63.0	8.149	0.795	1690.562	.039%	98.695%
64.0	8.100	0.797	1691.359	.039%	98.741%
65.0	8.065	0.800	1692.159	.039%	98.788%
66.0	8.023	0.803	1692.962	.039%	98.835%
67.0	7.980	0.805	1693.767	.039%	98.882%
68.0	7.938	0.806	1694.573	.039%	98.929%
69.0	7.903	0.808	1695.381	.039%	98.976%
70.0	7.875	0.810	1696.191	.040%	99.023%
71.0	7.861	0.813	1697.005	.040%	99.071%
72.0	7.847	0.817	1697.821	.040%	99.118%
73.0	7.819	0.819	1698.641	.040%	99.166%
74.0	7.812	0.822	1699.462	.040%	99.214%
75.0	7.798	0.825	1700.287	.040%	99.262%

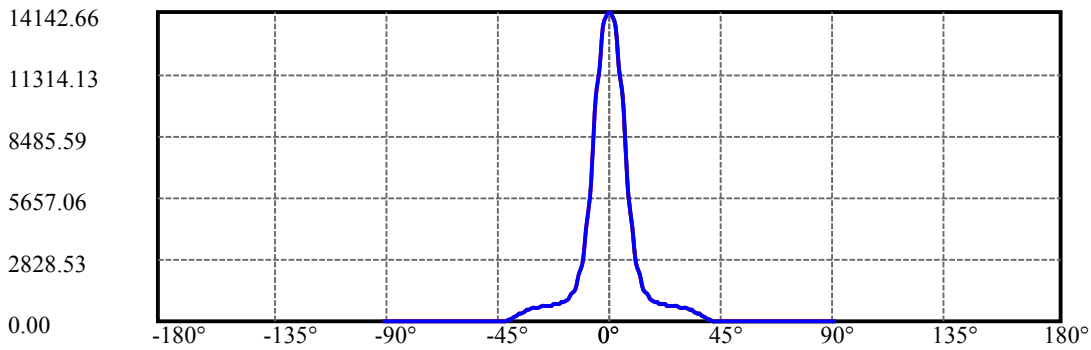
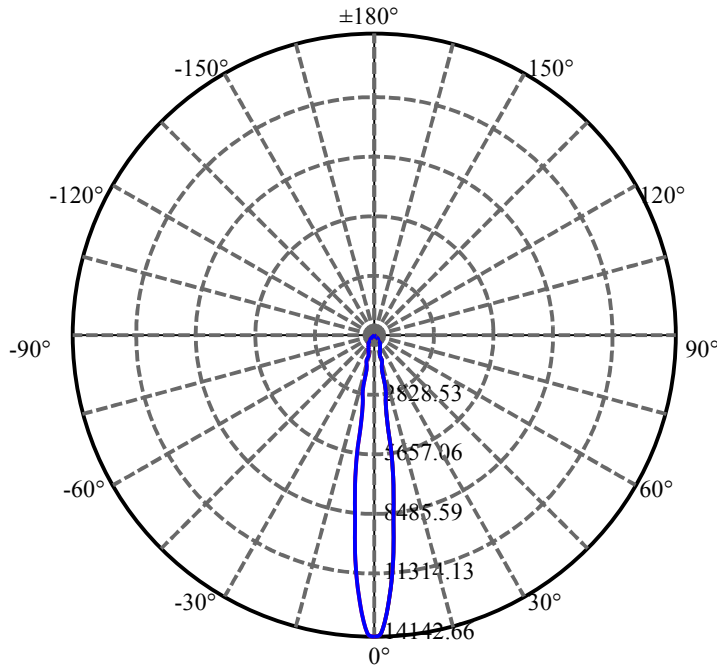
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.770	0.826	1701.114	.040%	99.311%
77.0	7.755	0.828	1701.941	.040%	99.359%
78.0	7.748	0.830	1702.771	.040%	99.407%
79.0	7.727	0.832	1703.603	.041%	99.456%
80.0	7.720	0.833	1704.436	.041%	99.505%
81.0	7.777	0.838	1705.274	.041%	99.554%
82.0	8.002	0.856	1706.129	.042%	99.603%
83.0	7.868	0.863	1706.992	.042%	99.654%
84.0	7.826	0.855	1707.847	.042%	99.704%
85.0	7.924	0.860	1708.706	.042%	99.754%
86.0	7.917	0.866	1709.572	.042%	99.805%
87.0	7.692	0.854	1710.427	.042%	99.854%
88.0	7.580	0.837	1711.263	.041%	99.903%
89.0	7.559	0.830	1712.093	.040%	99.952%
90.0	7.545	0.828	1712.921	.040%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	1447.50	70.61%	84.50%
0-40	1667.49	81.34%	97.35%
0-60	1688.18	82.35%	98.56%
0-90	1712.09	83.52%	99.95%
0-120	1712.09	83.52%	99.95%
0-180	1712.92	83.56%	100.00%
60-90	24.70	1.21%	1.44%
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%
0-27.72	1370.34	66.85%	80.00%

ZONAL LUMEN SUMMARY

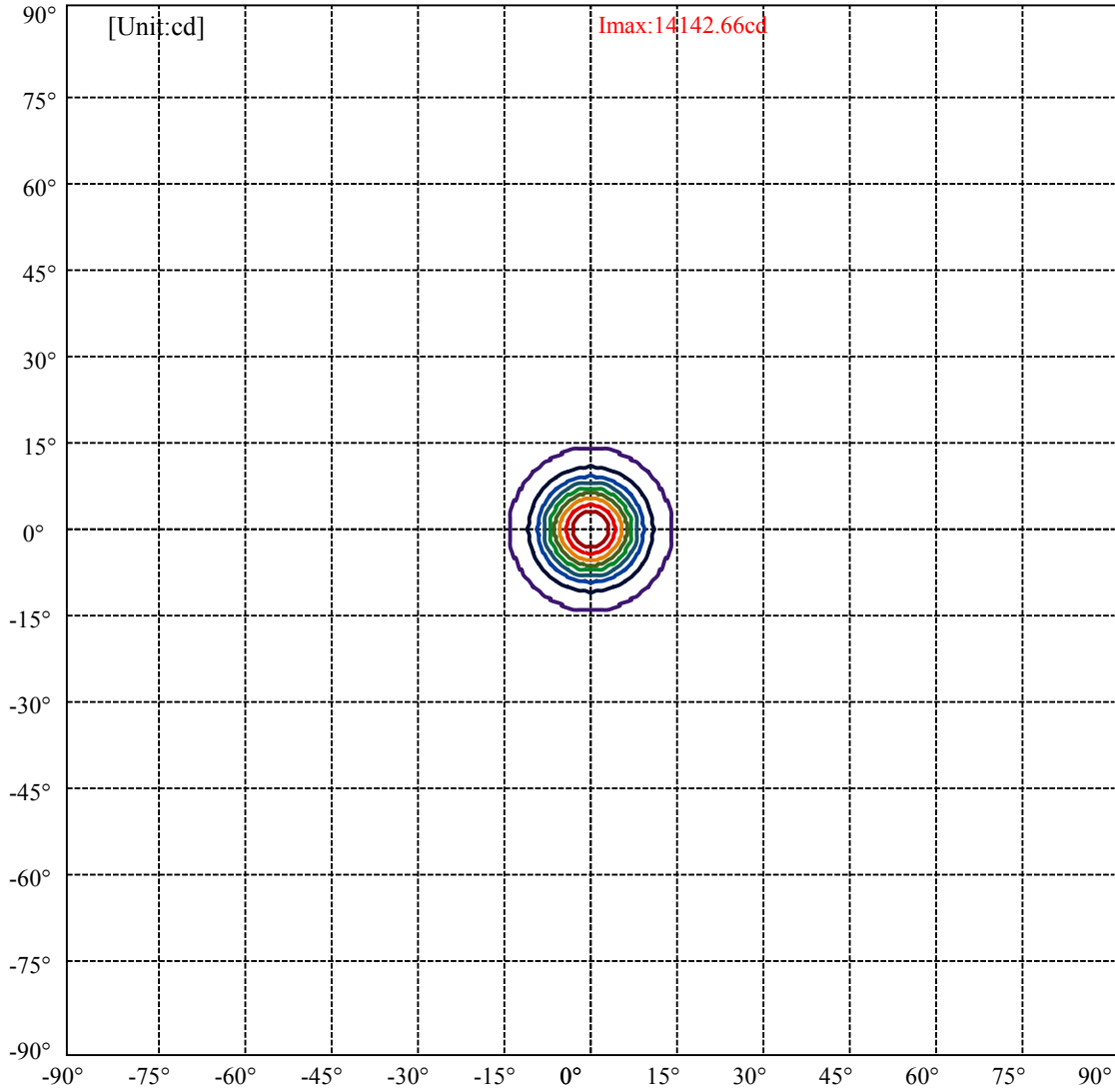
0-10	732.32
10-20	389.35
20-30	325.82
30-40	220.00
40-50	12.74
50-60	7.95
60-70	8.01
70-80	8.24
80-90	7.66
90-100	0.00
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



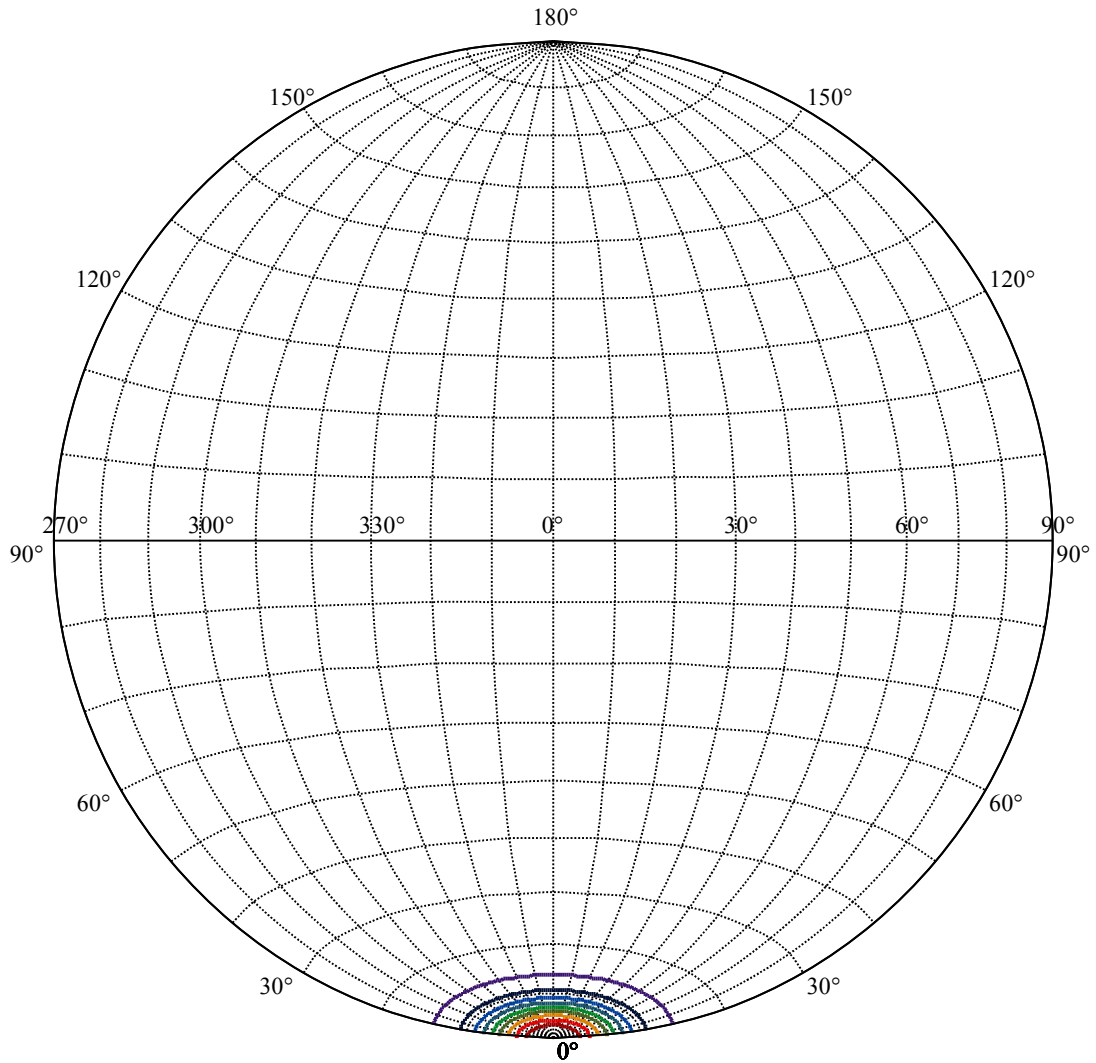
C0(Max): —————
C0/C180: —————
C90/C270: —————

Field angle(10%Imax):C0/180Left:13.9 Right:13.9
:C90/270Left:13.9 Right:13.9

Beam Angle(50%Imax):C0/180Left:7.0 Right:7.0
:C90/270Left:7.0 Right:7.0



(10%Imax) 1414.27	—
(20%Imax) 2828.53	—
(30%Imax) 4242.8	—
(40%Imax) 5657.06	—
(50%Imax) 7071.33	—
(60%Imax) 8485.59	—
(70%Imax) 9899.86	—
(80%Imax) 11314.1	—
(90%Imax) 12728.4	—



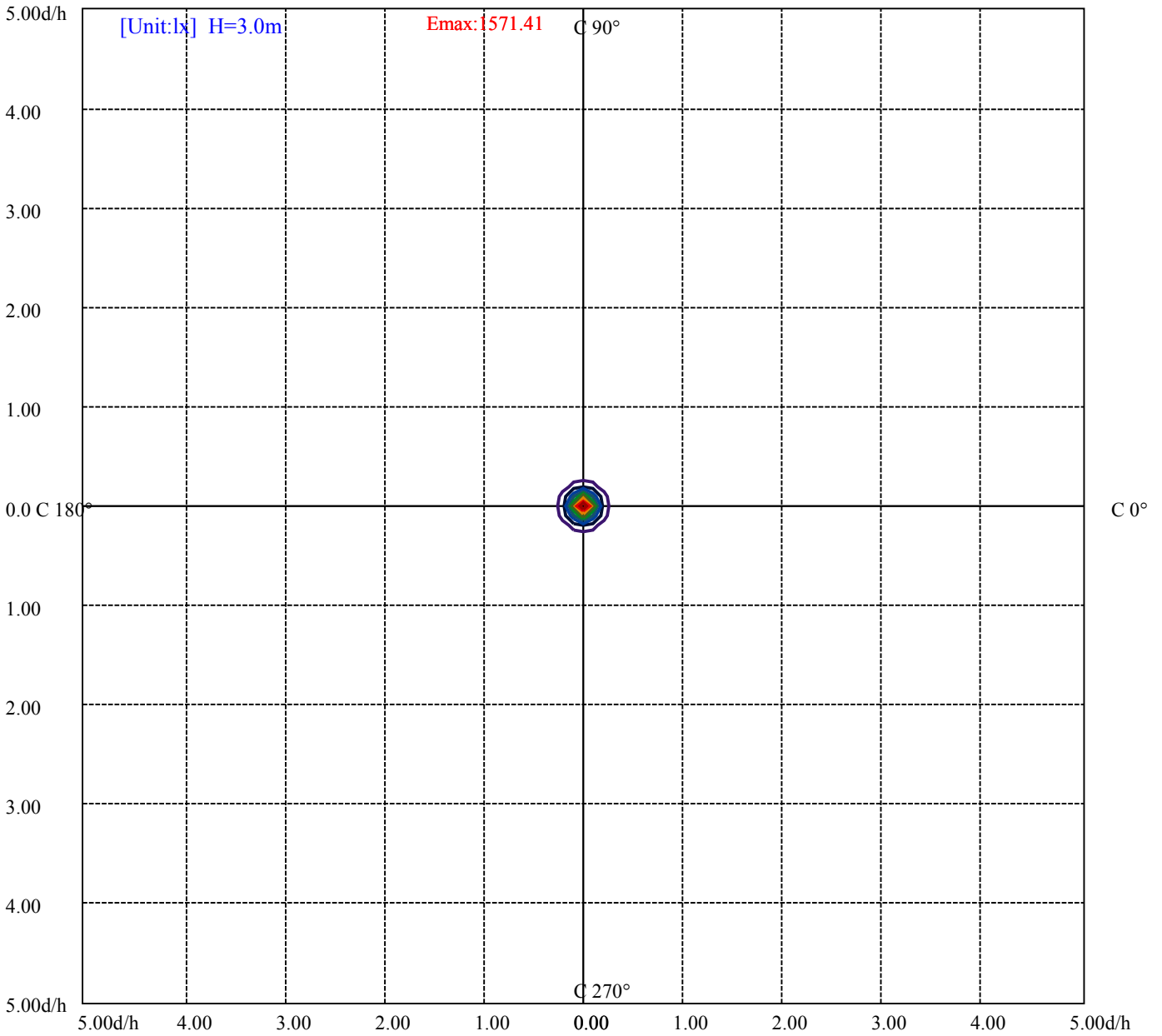
House

[Unit:cd]

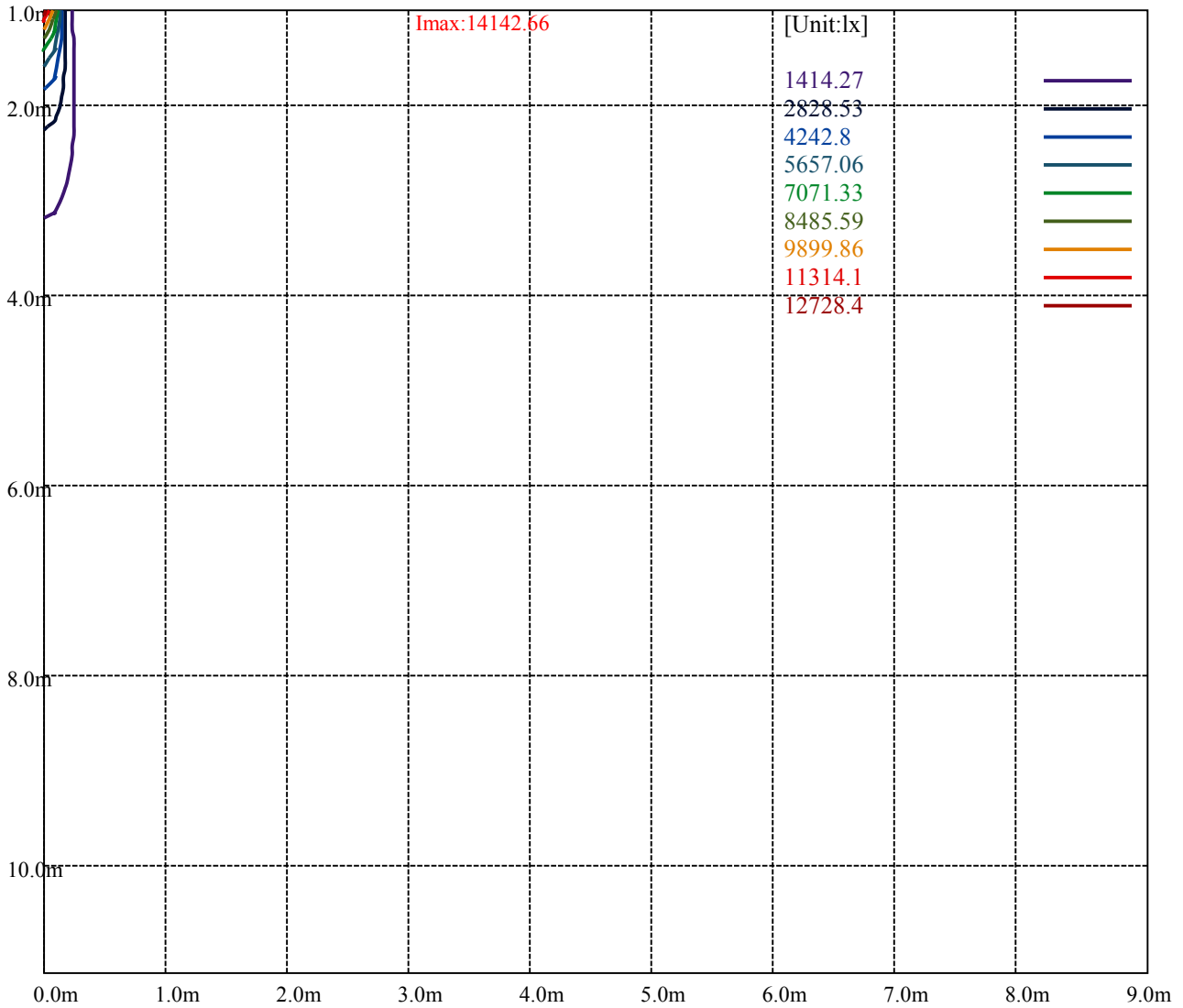
Road

Imax:14142.66

(10%Imax) 1414.27	—
(20%Imax) 2828.53	—
(30%Imax) 4242.8	—
(40%Imax) 5657.06	—
(50%Imax) 7071.33	—
(60%Imax) 8485.59	—
(70%Imax) 9899.86	—
(80%Imax) 11314.1	—
(90%Imax) 12728.4	—



- (10%Emax) 157.14
- (20%Emax) 314.2811
- (30%Emax) 471.4211
- (40%Emax) 628.5623
- (50%Emax) 785.7022
- (60%Emax) 942.8422
- (70%Emax) 1099.983
- (80%Emax) 1257.122
- (90%Emax) 1414.267



Luminance Table

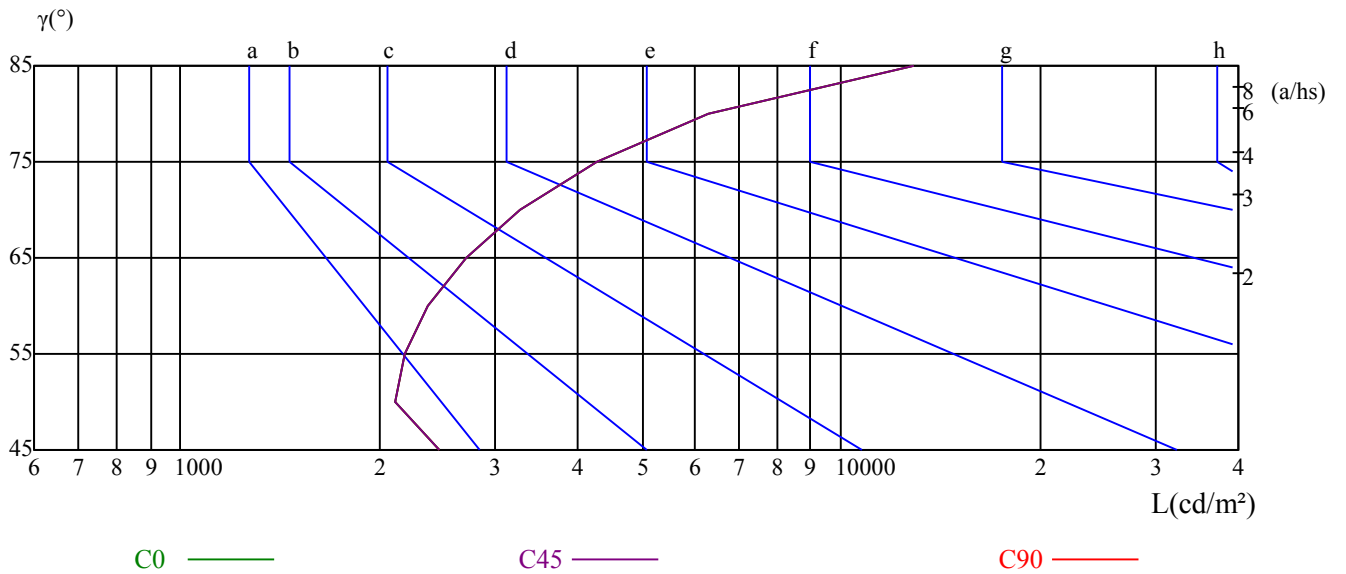
γ	45	50	55	60	65	70	75	80	85
C0	2458	2111	2179	2364	2705	3263	4270	6301	12886
C45	2458	2111	2179	2364	2705	3263	4270	6301	12886
C90	2458	2111	2179	2364	2705	3263	4270	6301	12886

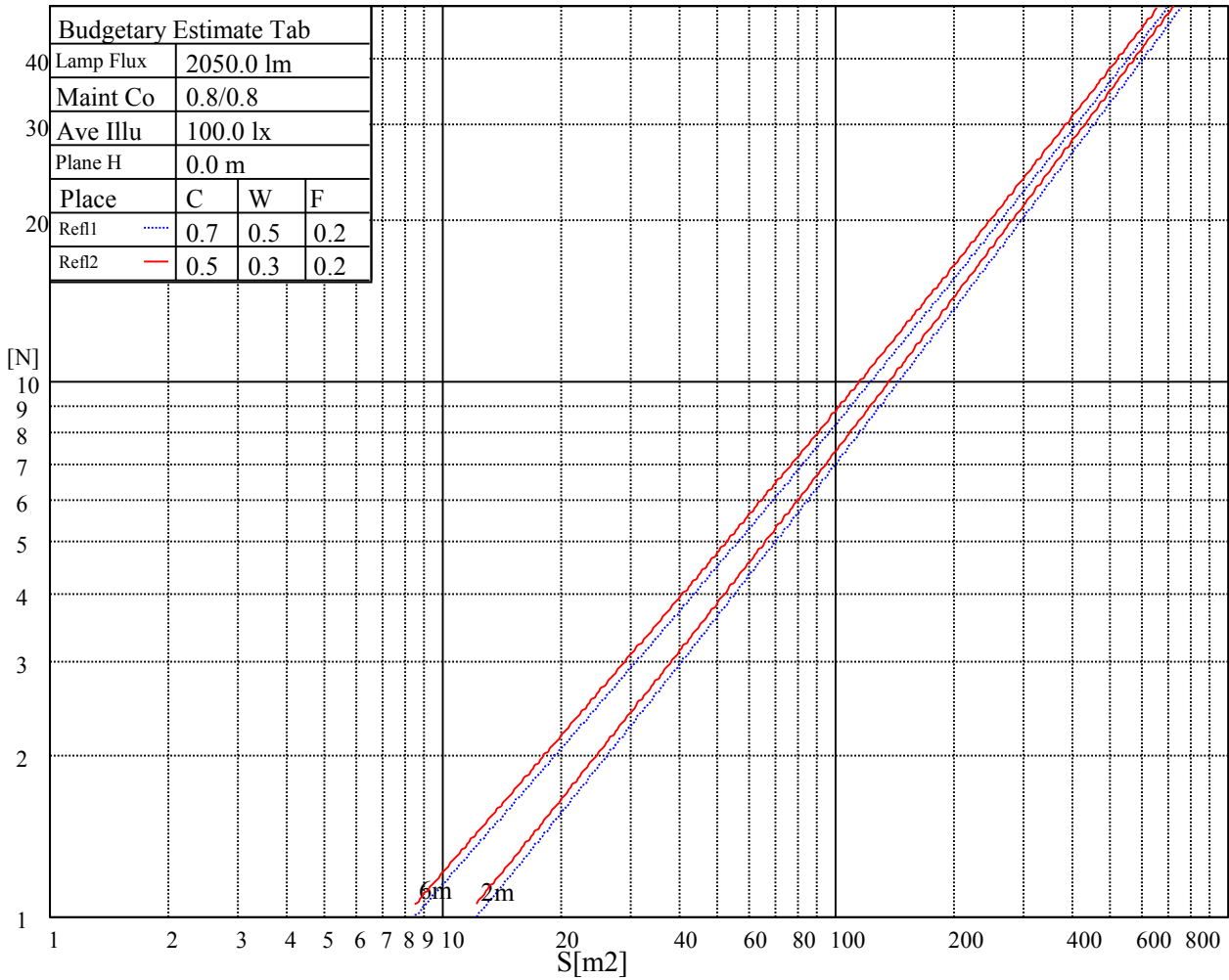
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
2705	2705	2705	4270	4270	4270	12886	12886	12886

Glare Table

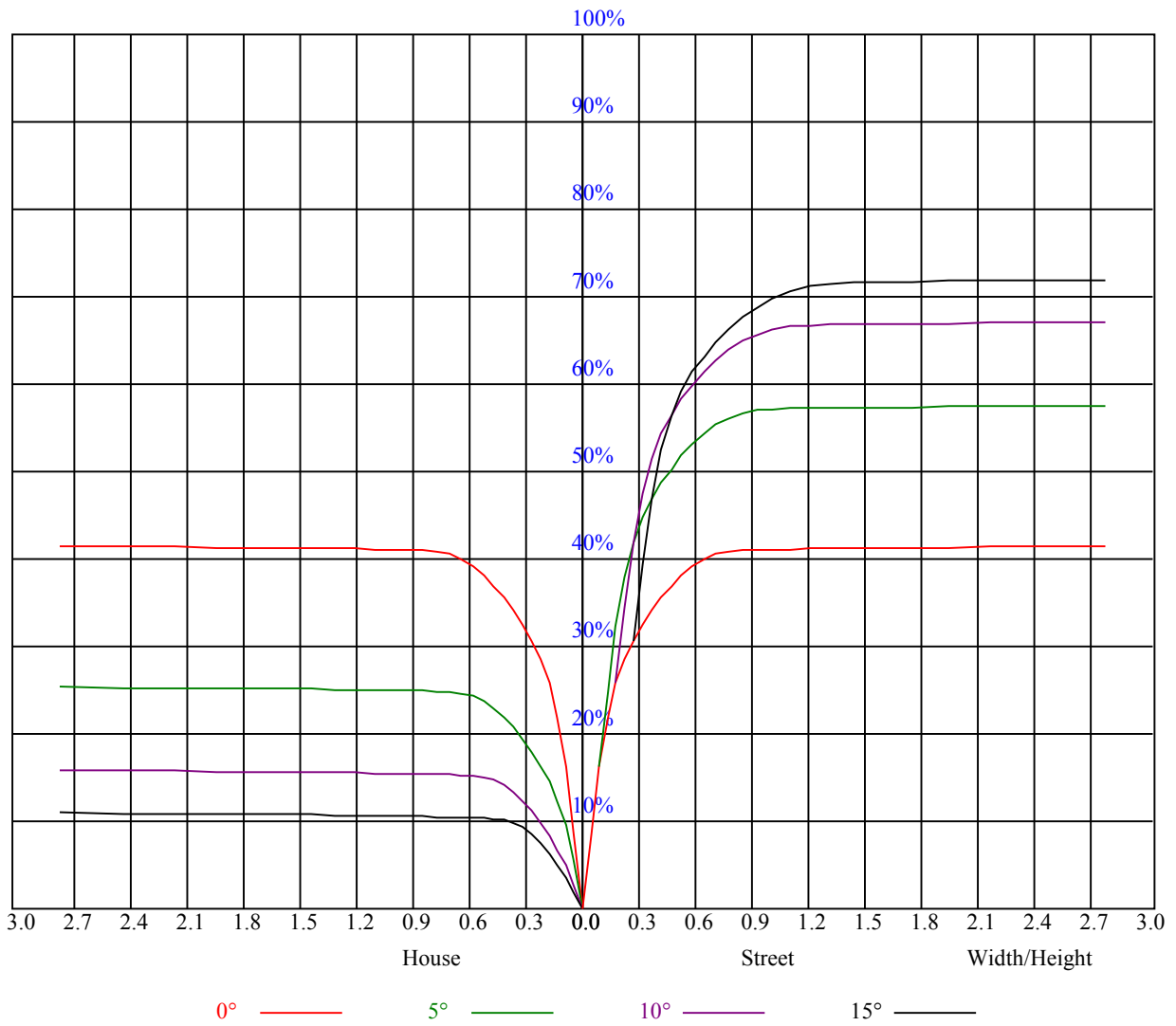
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	<=300				
1.5	B		2000	1000	500	<=300			
1.85	C			2000	1000	500	<=300		
2.2	D				2000	1000	500	<=300	
2.55	E					2000	1000	500	<=300
		a	b	c	d	e	f	g	h

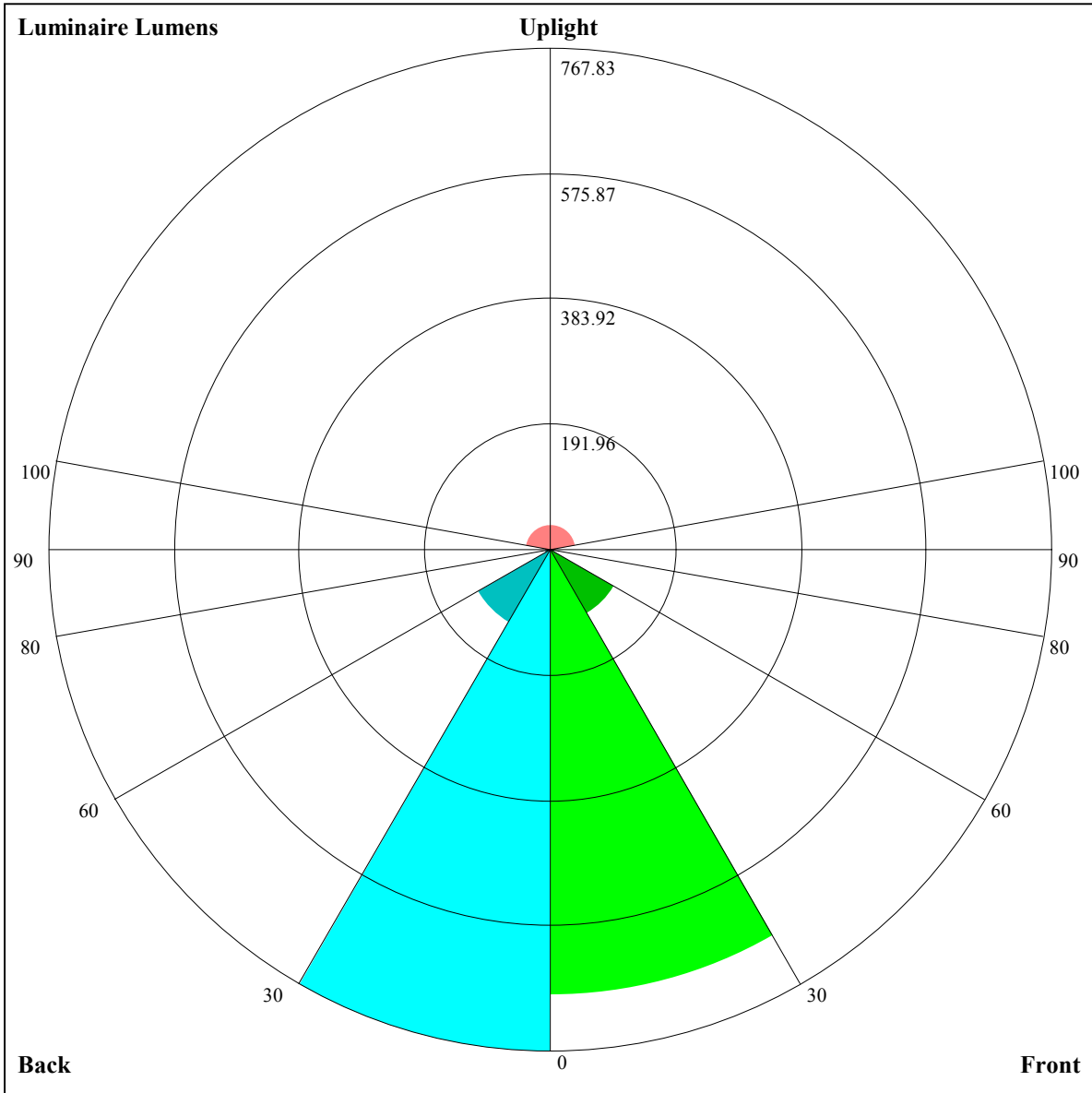
Luminance Limiting Curve





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 RHOFC=20 CU															
0	0.99	0.99	0.99	0.97	0.97	0.97	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85	0.84
1	0.94	0.92	0.90	0.92	0.90	0.89	0.89	0.87	0.86	0.86	0.85	0.84	0.83	0.82	0.81	0.80
2	0.89	0.86	0.84	0.88	0.85	0.83	0.85	0.83	0.81	0.82	0.81	0.80	0.80	0.79	0.78	0.77
3	0.85	0.82	0.79	0.84	0.81	0.78	0.82	0.79	0.77	0.80	0.78	0.76	0.78	0.76	0.75	0.74
4	0.81	0.78	0.75	0.80	0.77	0.74	0.79	0.76	0.74	0.77	0.75	0.73	0.76	0.74	0.72	0.71
5	0.78	0.74	0.71	0.77	0.74	0.71	0.76	0.73	0.71	0.75	0.72	0.70	0.73	0.71	0.69	0.68
6	0.75	0.71	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.72	0.70	0.67	0.71	0.69	0.67	0.66
7	0.72	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.66	0.70	0.67	0.65	0.69	0.67	0.65	0.64
8	0.70	0.66	0.64	0.70	0.66	0.64	0.69	0.66	0.63	0.68	0.65	0.63	0.67	0.65	0.63	0.62
9	0.68	0.64	0.62	0.68	0.64	0.62	0.67	0.64	0.62	0.66	0.63	0.61	0.66	0.63	0.61	0.60
10	0.66	0.62	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.65	0.62	0.60	0.64	0.61	0.60	0.59





Luminaire Lumens:

FL=681.1,FM=111.67,FH=8.13,FVH=4.24

BL=767.83,BM=129.15,BH=8.15,BVH=4.26

UL=8.23,UH=39.17

BUG Rating:B2-U2-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	14180.63	13781.25	12993.75	11947.50	10614.38	8707.50	7138.13	5512.50	4286.25
45.0	14214.38	14056.88	13584.38	12836.25	11581.88	10023.75	8505.00	6688.13	5203.13
90.0	14152.50	14051.25	13730.63	12892.50	11118.94	10412.44	8461.69	6833.25	5292.00
135.0	14023.13	14225.63	14152.50	13871.25	13213.13	12060.00	10710.00	8949.38	7340.63
180.0	14180.63	14310.00	14225.63	13820.63	13151.25	10951.31	10584.00	8827.31	7224.75
225.0	14214.38	14163.75	13871.25	13095.00	11210.63	10868.63	9240.19	7547.06	6085.13
270.0	14152.50	14023.13	13584.38	12881.25	11745.00	10282.50	8825.63	7177.50	5782.50
315.0	14023.13	13573.13	12836.25	11199.38	10170.00	8655.75	6968.81	5396.06	4215.94
360.0	14180.63	13781.25	12993.75	11947.50	10614.38	8707.50	7138.13	5512.50	4286.25

C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	3251.25	2896.88	2046.94	1690.88	1430.44	1200.94	1071.00	975.38	894.38
45.0	3870.00	2908.13	2546.44	1845.00	1456.88	1244.81	1101.94	976.50	908.44
90.0	3765.38	2897.44	2278.69	1731.38	1468.69	1115.61	1101.38	997.37	924.13
135.0	5630.63	4190.63	3217.50	2925.00	1972.13	1576.69	1334.25	1154.81	1026.56
180.0	5534.44	4137.75	3231.56	2507.63	2044.13	1660.50	1387.13	1114.37	1086.24
225.0	4636.69	3543.75	2837.25	2253.38	1873.69	1562.06	1332.56	1114.37	1060.82
270.0	4438.13	3420.00	2846.25	2283.19	1816.88	1548.00	1342.69	1155.94	1048.50
315.0	3233.81	2533.50	2071.69	1692.56	1446.19	1121.40	1078.88	994.89	922.28
360.0	3251.25	2896.88	2046.94	1690.88	1430.44	1200.94	1071.00	975.38	894.38

C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	851.06	820.69	794.25	775.69	757.69	736.88	721.13	705.38	685.69
45.0	860.63	822.94	794.81	773.44	753.19	736.88	715.50	693.56	674.44
90.0	862.31	821.03	791.83	764.38	742.73	724.50	704.81	679.44	660.77
135.0	949.50	892.13	830.81	801.56	778.50	748.69	729.56	714.38	689.63
180.0	969.81	897.47	842.01	797.34	771.64	748.86	726.24	706.22	690.19
225.0	962.21	889.71	842.68	805.11	777.43	757.46	736.65	717.41	702.56
270.0	966.94	903.94	846.56	813.38	789.19	766.69	750.94	734.63	716.63
315.0	856.86	819.79	792.90	767.53	750.15	734.29	718.26	702.68	688.44
360.0	851.06	820.69	794.25	775.69	757.69	736.88	721.13	705.38	685.69

C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	666.56	650.81	634.50	619.88	586.13	525.94	462.38	384.19	302.06
45.0	655.31	638.44	623.81	609.75	585.00	537.75	481.50	395.44	324.56
90.0	642.26	628.37	612.11	599.91	580.67	532.29	473.01	398.87	329.68
135.0	668.81	651.94	634.50	617.63	603.00	586.69	554.63	500.06	424.69
180.0	672.02	655.09	636.24	615.83	600.47	584.72	560.98	506.59	448.03
225.0	688.73	672.19	652.39	634.78	616.39	597.94	558.06	497.36	433.69
270.0	699.75	684.00	663.19	645.19	626.06	606.38	566.44	503.44	429.19
315.0	673.20	653.85	636.53	619.37	595.41	537.86	475.93	396.34	324.68
360.0	666.56	650.81	634.50	619.88	586.13	525.94	462.38	384.19	302.06

C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	284.06	162.45	89.44	45.06	26.94	22.84	18.62	16.26	13.33
45.0	286.31	185.57	106.65	60.19	33.69	24.47	20.36	17.38	14.96
90.0	250.43	173.70	114.64	60.19	28.97	23.46	20.08	16.09	14.12
135.0	358.31	286.88	197.44	131.85	76.84	33.53	23.01	19.46	15.64
180.0	367.99	300.21	229.39	147.94	89.72	43.54	25.59	20.08	15.81
225.0	355.84	273.26	201.54	127.52	67.73	33.13	25.09	18.68	15.47
270.0	356.06	291.38	189.90	125.10	70.88	32.74	25.43	20.36	16.65
315.0	244.74	167.85	107.83	53.21	26.16	22.50	18.62	15.64	12.99
360.0	284.06	162.45	89.44	45.06	26.94	22.84	18.62	16.26	13.33

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	10.52	10.24	9.96	9.79	9.56	9.39	9.23	9.06	8.89
45.0	10.97	10.41	10.13	9.96	9.73	9.56	9.45	9.28	9.11
90.0	11.93	10.52	10.24	10.01	9.79	9.62	9.51	9.28	9.17
135.0	13.50	11.93	10.46	10.24	9.96	9.79	9.62	9.45	9.28
180.0	13.50	11.76	10.29	10.01	9.79	9.62	9.45	9.34	9.17
225.0	13.44	10.69	10.35	10.13	9.90	9.62	9.45	9.28	9.11
270.0	13.78	10.74	10.41	10.13	9.90	9.68	9.51	9.34	9.17
315.0	10.46	10.13	9.90	9.73	9.51	9.34	9.17	9.00	8.89
360.0	10.52	10.24	9.96	9.79	9.56	9.39	9.23	9.06	8.89
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	8.78	8.66	8.55	8.44	8.38	8.27	8.21	8.16	8.10
45.0	9.00	8.83	8.72	8.61	8.55	8.44	8.38	8.27	8.21
90.0	9.00	8.89	8.78	8.66	8.55	8.44	8.38	8.27	8.21
135.0	9.11	9.00	8.83	8.72	8.61	8.55	8.44	8.38	8.27
180.0	9.00	8.83	8.72	8.61	8.55	8.44	8.38	8.27	8.21
225.0	9.00	8.83	8.72	8.61	8.49	8.44	8.33	8.27	8.21
270.0	9.06	8.89	8.78	8.66	8.55	8.49	8.38	8.33	8.27
315.0	8.72	8.61	8.49	8.44	8.33	8.27	8.21	8.16	8.10
360.0	8.78	8.66	8.55	8.44	8.38	8.27	8.21	8.16	8.10
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.04	7.99	7.99	7.93	7.88	7.82	7.82	7.82	7.82
45.0	8.16	8.10	8.10	7.99	7.93	7.93	7.88	7.88	7.82
90.0	8.16	8.10	8.04	8.04	7.99	7.93	7.88	7.88	7.82
135.0	8.21	8.16	8.10	8.04	7.99	7.93	7.88	7.88	7.88
180.0	8.16	8.10	8.04	7.99	7.99	7.93	7.88	7.82	7.82
225.0	8.16	8.10	8.10	8.10	7.99	7.99	7.93	7.88	7.88
270.0	8.21	8.21	8.16	8.10	8.10	8.04	8.04	7.99	7.99
315.0	8.10	8.04	7.99	7.99	7.99	7.93	7.93	7.88	7.88
360.0	8.04	7.99	7.99	7.93	7.88	7.82	7.82	7.82	7.82
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	7.82	7.76	7.76	7.76	7.71	7.71	7.71	7.71	7.71
45.0	7.82	7.76	7.76	7.76	7.76	7.71	7.71	7.65	7.65
90.0	7.82	7.82	7.82	7.82	7.76	7.76	7.76	7.76	7.76
135.0	7.82	7.82	7.76	7.76	7.76	7.76	7.71	7.71	7.71
180.0	7.82	7.76	7.76	7.76	7.76	7.71	7.71	7.71	7.65
225.0	7.88	7.82	7.82	7.82	7.76	7.76	7.76	7.71	7.71
270.0	7.99	7.99	7.99	7.93	7.88	7.88	7.88	7.88	7.88
315.0	7.82	7.82	7.82	7.76	7.76	7.76	7.76	7.71	7.71
360.0	7.82	7.76	7.76	7.76	7.71	7.71	7.71	7.71	7.71
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.71	7.65	7.71	7.76	7.88	7.93	7.88	7.59	7.54
45.0	7.71	7.65	7.65	7.65	7.71	7.76	7.65	7.59	7.59
90.0	7.76	7.71	7.76	7.71	7.71	7.76	7.59	7.59	7.54
135.0	7.71	7.71	7.65	7.65	7.71	7.76	7.65	7.59	7.59
180.0	7.71	7.71	7.71	7.71	7.82	8.04	7.54	7.54	7.54
225.0	7.82	8.78	8.55	8.04	8.44	8.04	7.54	7.54	7.54
270.0	7.99	8.66	8.04	8.04	8.10	7.88	7.71	7.59	7.59
315.0	7.82	8.16	7.88	8.04	8.04	8.16	7.99	7.59	7.54
360.0	7.71	7.65	7.71	7.76	7.88	7.93	7.88	7.59	7.54

Intensity data(cd)

C/γ(°)	90.0
0.0	7.54
45.0	7.54
90.0	7.54
135.0	7.54
180.0	7.54
225.0	7.54
270.0	7.54
315.0	7.59
360.0	7.54