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NT

Client:

LumCAT: 2-2679-L

Luminaire: 92.70.411.00

Report No: 2024423-B010

Ballast type: AC

Test No: 2024423-C010

LampCAT: NICHIA NFCWJ130B-V3

Lamp flux(lm): 2920.0

Number of Lamps: 1

Length(mm): 0

Phm Type: C

Voltage(V): 36.240

Current(A): 0.576

Power (W): 20.874

PF: 0.000

Width(mm): 0

Height(mm): 0

Photometric Results

Lumens(lm): 2465.04, Efficiency(%): 84.42% , Luminous Efficacy(lm/W): 118.09

Central intensity(cd): 8150.194, Maximum intensity(cd): 8150.194

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.8

[C90/270]Total=23.8

Field angle(10%Imax): [C0/180]Total=60.8

[C90/270]Total=60.8

Maximum s/h(1/2): C0_180=0.40 C90_270=0.40

Maximum s/h(1/4): C0_180=0.47 C90_270=0.47

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 84.42%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 97.892%

Equipment: GMS1980
Temperature(°C): 25.0

Date: 2024/4/23
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	8150.194	0.000	0	0.00%	0.00%
1.0	8063.801	7.758	7.758	0.27%	0.31%
2.0	7863.361	22.860	30.618	0.78%	1.24%
3.0	7546.974	36.856	67.475	1.26%	2.74%
4.0	7159.335	49.227	116.701	1.69%	4.73%
5.0	6773.453	59.938	176.64	2.05%	7.17%
6.0	6380.767	69.129	245.768	2.37%	9.97%
7.0	5950.699	76.541	322.31	2.62%	13.08%
8.0	5551.283	82.317	404.627	2.82%	16.41%
9.0	5163.645	86.839	491.466	2.97%	19.94%
10.0	4774.105	89.933	581.399	3.08%	23.59%
11.0	4387.490	91.543	672.942	3.14%	27.30%
12.0	4051.644	92.252	765.194	3.16%	31.04%
13.0	3717.920	92.205	857.399	3.16%	34.78%
14.0	3409.287	91.228	948.627	3.12%	38.48%
15.0	3139.279	89.902	1038.528	3.08%	42.13%
16.0	2879.439	88.191	1126.719	3.02%	45.71%
17.0	2650.689	86.119	1212.838	2.95%	49.20%
18.0	2438.691	83.913	1296.751	2.87%	52.61%
19.0	2257.345	81.701	1378.453	2.80%	55.92%
20.0	2082.435	79.430	1457.883	2.72%	59.14%
21.0	1923.766	76.927	1534.81	2.63%	62.26%
22.0	1785.580	74.541	1609.351	2.55%	65.29%
23.0	1656.684	72.228	1681.579	2.47%	68.22%
24.0	1539.054	69.870	1751.449	2.39%	71.05%
25.0	1412.155	67.104	1818.553	2.30%	73.77%
26.0	1267.590	63.256	1881.809	2.17%	76.34%
27.0	1206.368	60.526	1942.335	2.07%	78.80%
28.0	1105.410	58.529	2000.864	2.00%	81.17%
29.0	982.234	54.619	2055.483	1.87%	83.39%
30.0	863.558	49.836	2105.319	1.71%	85.41%
31.0	741.356	44.662	2149.981	1.53%	87.22%
32.0	636.776	39.482	2189.463	1.35%	88.82%
33.0	529.256	34.352	2223.815	1.18%	90.21%
34.0	429.855	29.026	2252.84	0.99%	91.39%
35.0	343.139	24.006	2276.846	0.82%	92.37%
36.0	270.337	19.533	2296.38	0.67%	93.16%
37.0	239.394	16.625	2313.004	0.57%	93.83%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	158.106	13.268	2326.272	0.45%	94.37%
39.0	107.294	9.059	2335.331	0.31%	94.74%
40.0	88.274	6.821	2342.152	0.23%	95.01%
41.0	78.340	5.933	2348.085	0.20%	95.26%
42.0	70.585	5.411	2353.495	0.19%	95.47%
43.0	63.958	4.984	2358.479	0.17%	95.68%
44.0	58.552	4.624	2363.103	0.16%	95.86%
45.0	54.104	4.329	2367.433	0.15%	96.04%
46.0	49.971	4.070	2371.503	0.14%	96.21%
47.0	46.123	3.822	2375.325	0.13%	96.36%
48.0	42.882	3.598	2378.923	0.12%	96.51%
49.0	40.088	3.407	2382.33	0.12%	96.64%
50.0	37.440	3.232	2385.562	0.11%	96.78%
51.0	35.121	3.070	2388.632	0.11%	96.90%
52.0	33.358	2.938	2391.571	0.10%	97.02%
53.0	31.661	2.828	2394.399	0.10%	97.13%
54.0	30.395	2.735	2397.134	0.09%	97.25%
55.0	29.437	2.671	2399.805	0.09%	97.35%
56.0	28.808	2.632	2402.437	0.09%	97.46%
57.0	28.486	2.620	2405.057	0.09%	97.57%
58.0	28.479	2.634	2407.691	0.09%	97.67%
59.0	28.603	2.669	2410.359	0.09%	97.78%
60.0	28.786	2.711	2413.071	0.09%	97.89%
61.0	28.647	2.741	2415.811	0.09%	98.00%
62.0	28.076	2.733	2418.545	0.09%	98.11%
63.0	26.986	2.678	2421.223	0.09%	98.22%
64.0	25.318	2.567	2423.789	0.09%	98.33%
65.0	23.497	2.416	2426.205	0.08%	98.42%
66.0	21.566	2.248	2428.453	0.08%	98.52%
67.0	19.868	2.083	2430.537	0.07%	98.60%
68.0	18.420	1.940	2432.476	0.07%	98.68%
69.0	17.462	1.831	2434.307	0.06%	98.75%
70.0	16.752	1.757	2436.064	0.06%	98.82%
71.0	16.364	1.712	2437.776	0.06%	98.89%
72.0	16.320	1.700	2439.475	0.06%	98.96%
73.0	16.401	1.711	2441.186	0.06%	99.03%
74.0	16.408	1.725	2442.911	0.06%	99.10%
75.0	16.284	1.727	2444.638	0.06%	99.17%

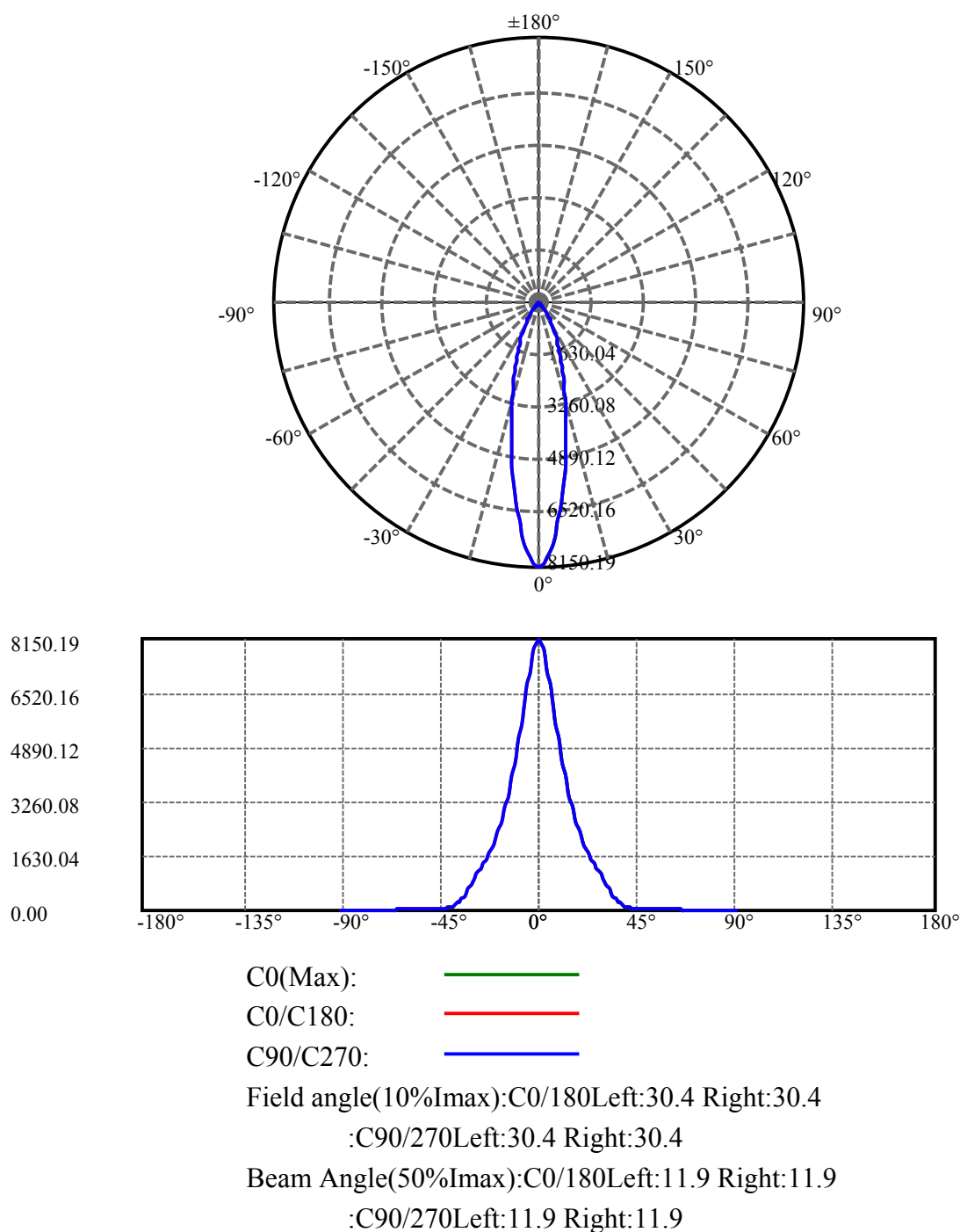
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	15.977	1.713	2446.351	0.06%	99.24%
77.0	15.516	1.679	2448.03	0.06%	99.31%
78.0	14.857	1.626	2449.656	0.06%	99.38%
79.0	14.002	1.551	2451.206	0.05%	99.44%
80.0	13.190	1.466	2452.672	0.05%	99.50%
81.0	12.568	1.393	2454.065	0.05%	99.55%
82.0	12.143	1.340	2455.405	0.05%	99.61%
83.0	11.829	1.303	2456.709	0.04%	99.66%
84.0	11.573	1.275	2457.983	0.04%	99.71%
85.0	11.273	1.247	2459.23	0.04%	99.76%
86.0	10.907	1.212	2460.443	0.04%	99.81%
87.0	10.651	1.180	2461.622	0.04%	99.86%
88.0	10.461	1.156	2462.779	0.04%	99.91%
89.0	10.285	1.137	2463.916	0.04%	99.95%
90.0	10.241	1.125	2465.042	0.04%	100.00%

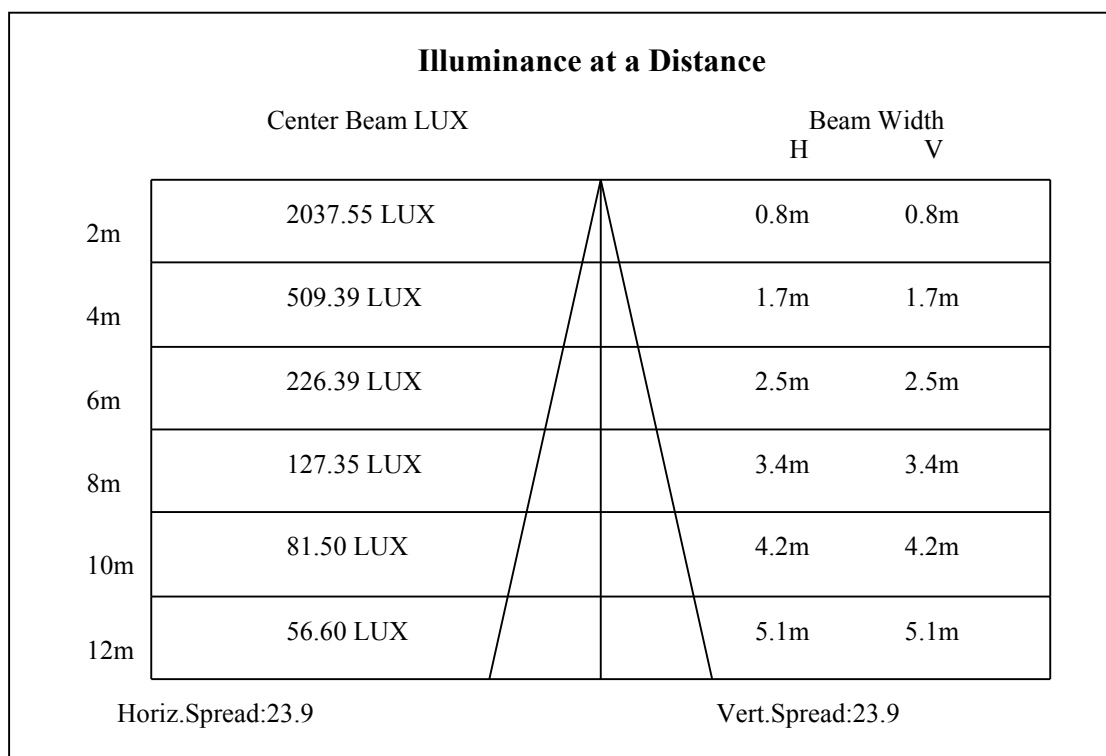
ZONAL LUMEN SUMMARY

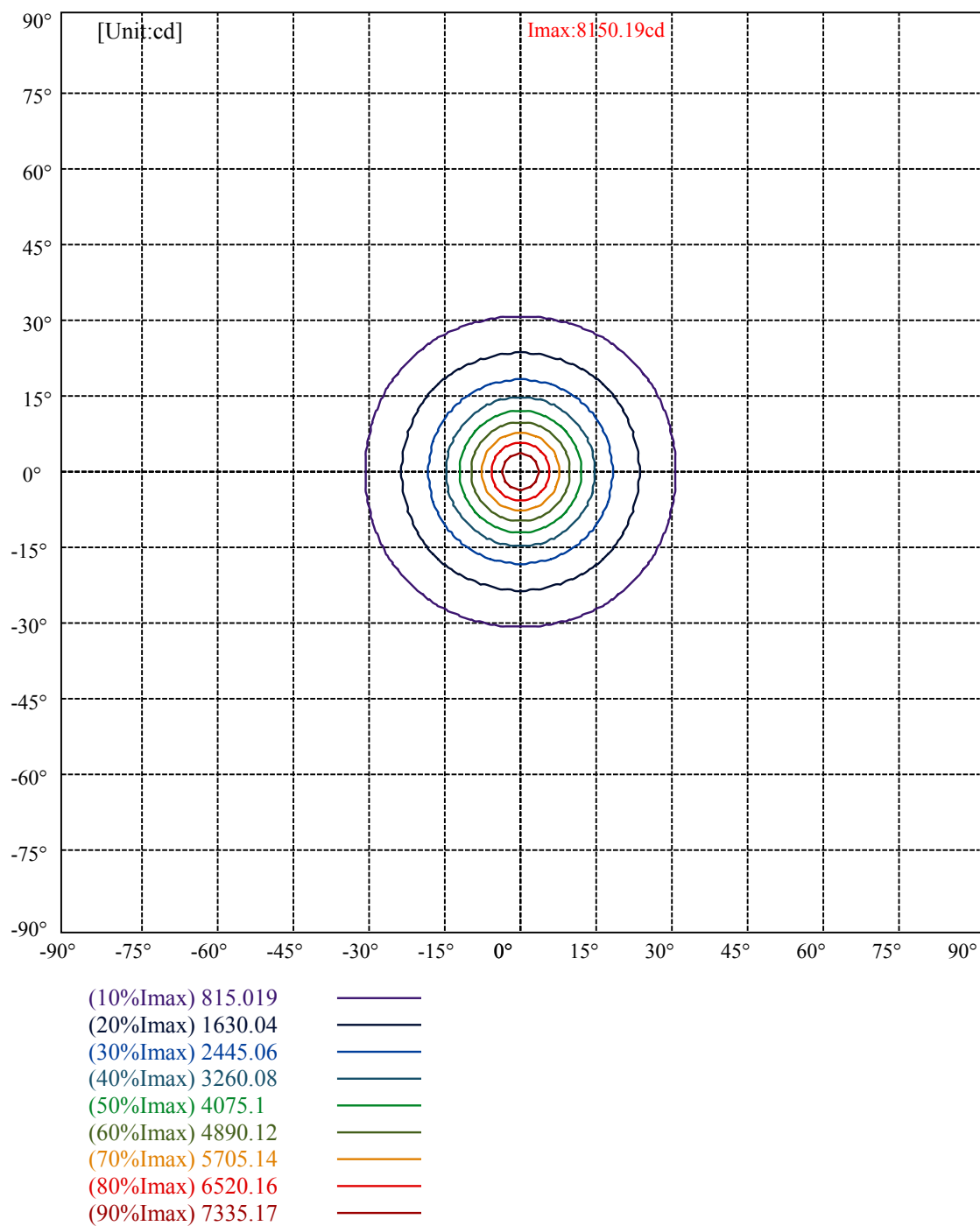
Zone	Lumens	%Lamp	%Fixt
0-30	2105.32	72.10%	85.41%
0-40	2342.15	80.21%	95.01%
0-60	2413.07	82.64%	97.89%
0-90	2463.92	84.38%	99.95%
0-120	2463.92	84.38%	99.95%
0-180	2465.04	84.42%	100.00%
60-90	50.85	1.74%	2.06%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.51	1972.03	67.54%	80.00%

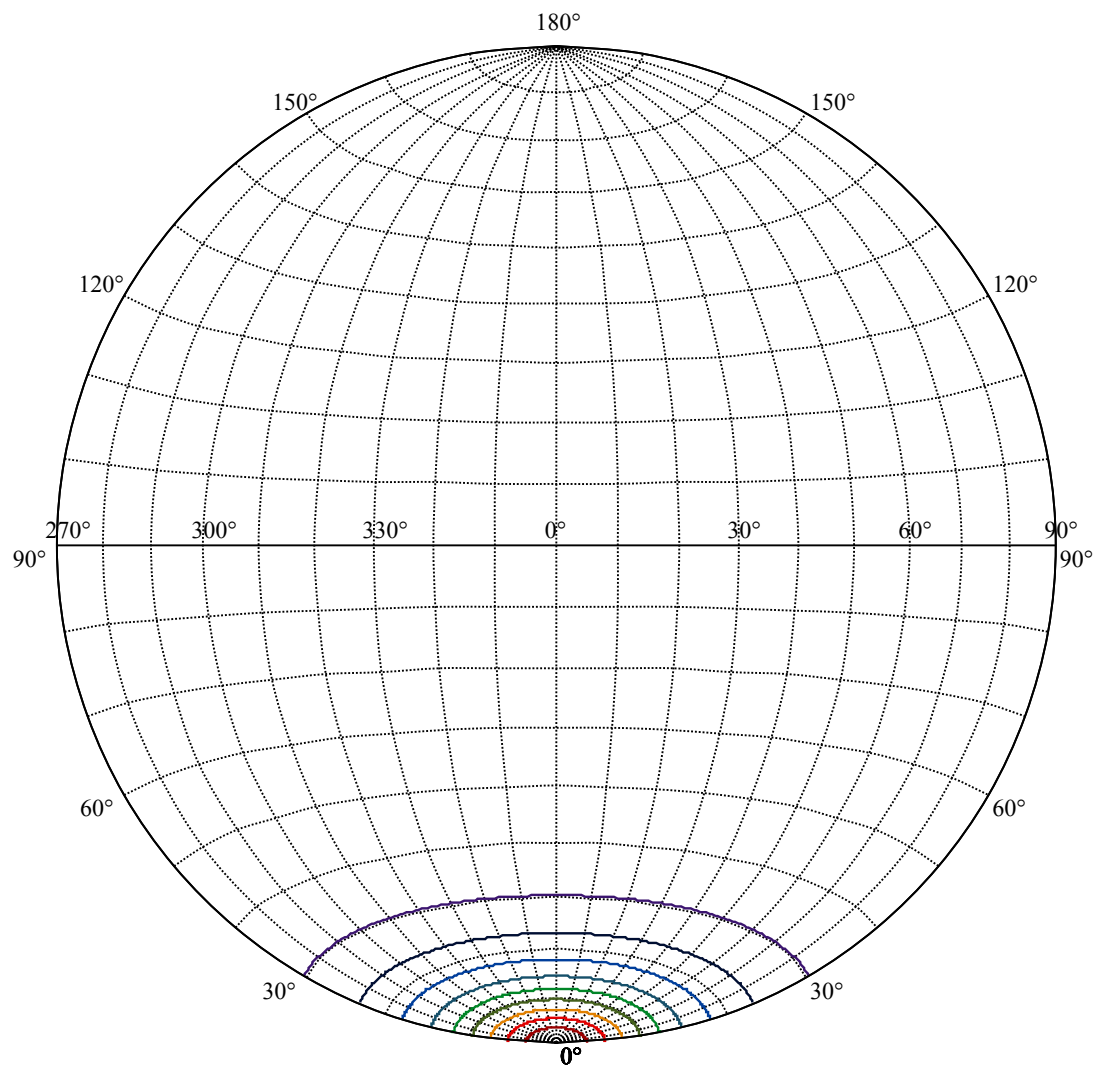
ZONAL LUMEN SUMMARY

0-10	581.40
10-20	876.48
20-30	647.44
30-40	236.83
40-50	43.41
50-60	27.51
60-70	22.99
70-80	16.61
80-90	11.24
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







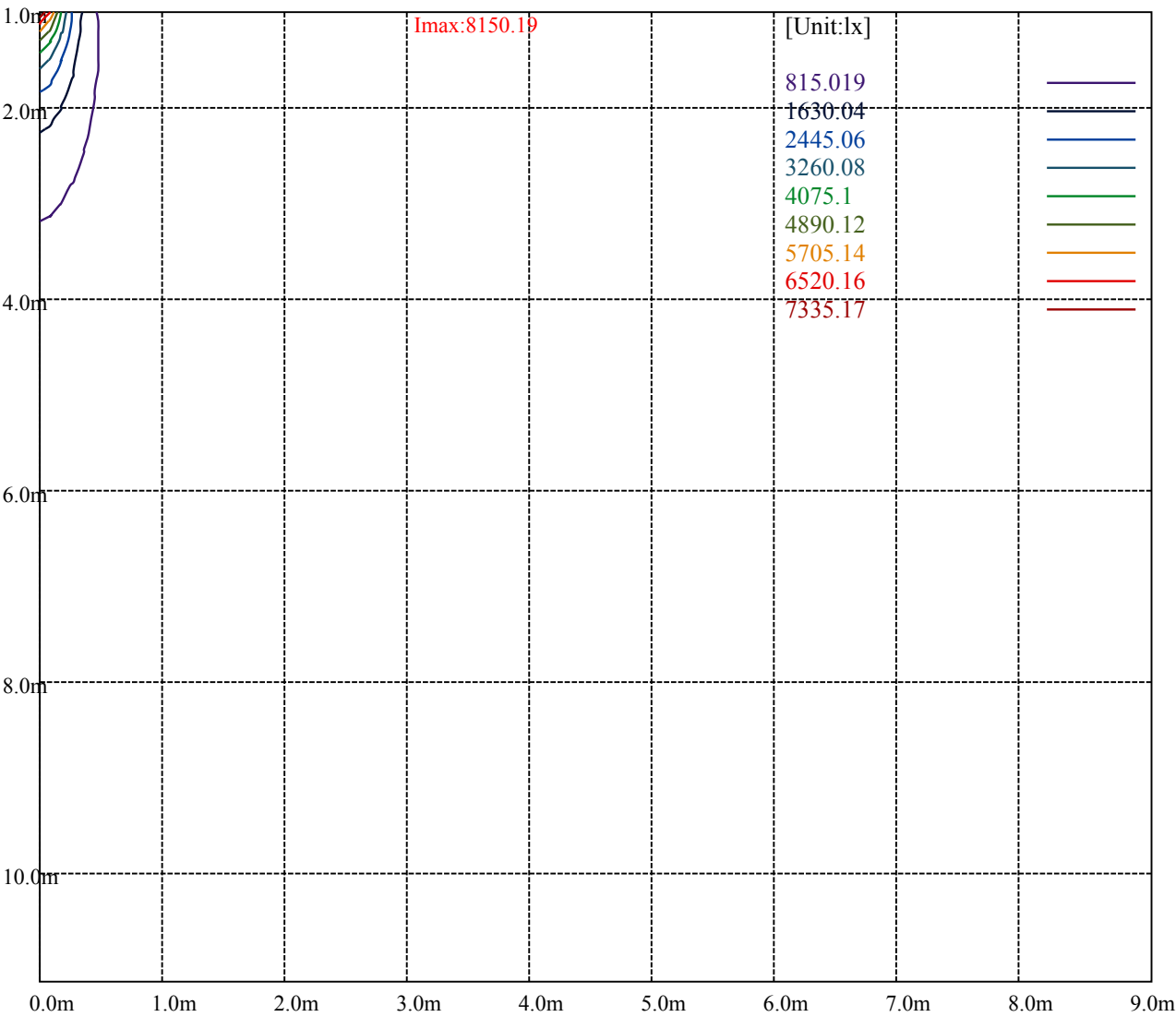


House

[Unit:cd]

Road

Imax:8150.19	
(10%Imax)	815.019
(20%Imax)	1630.04
(30%Imax)	2445.06
(40%Imax)	3260.08
(50%Imax)	4075.1
(60%Imax)	4890.12
(70%Imax)	5705.14
(80%Imax)	6520.16
(90%Imax)	7335.17



Luminance Table

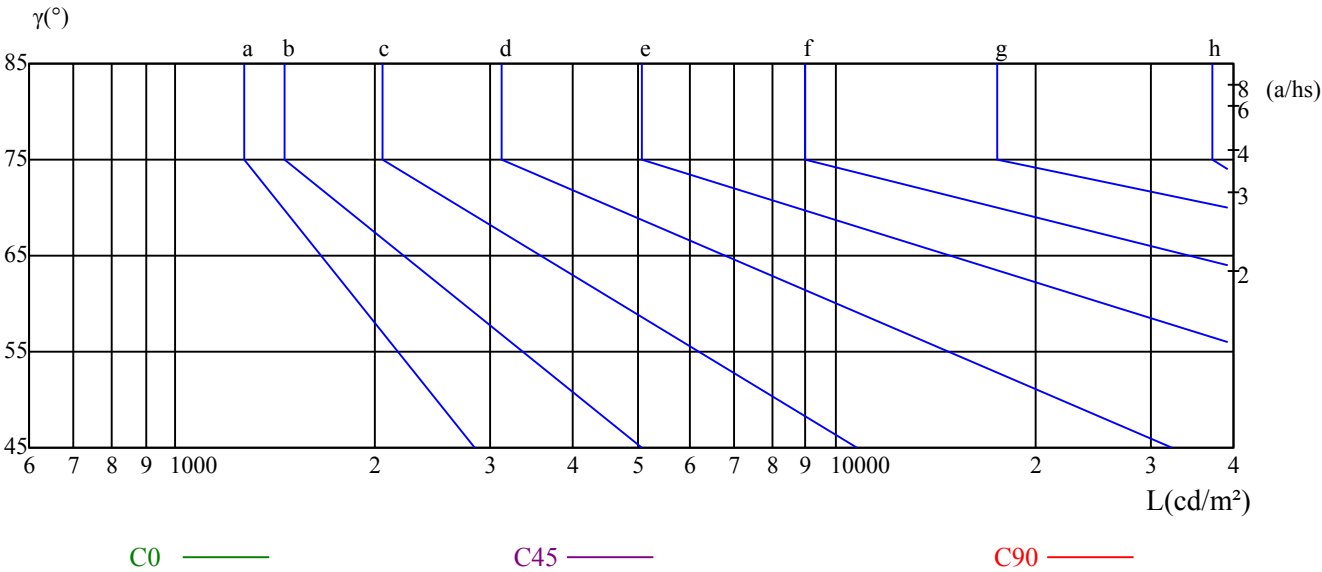
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

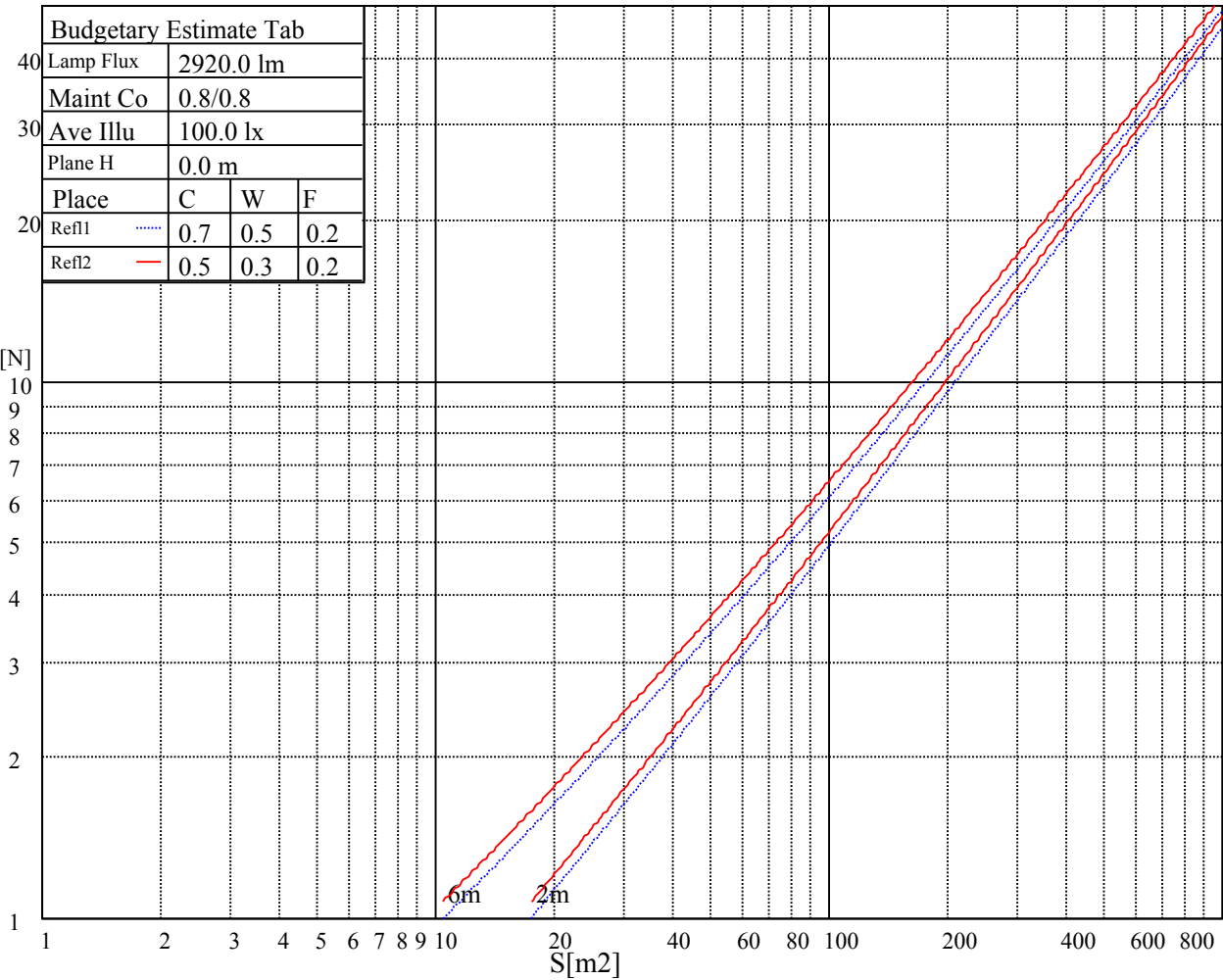
L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

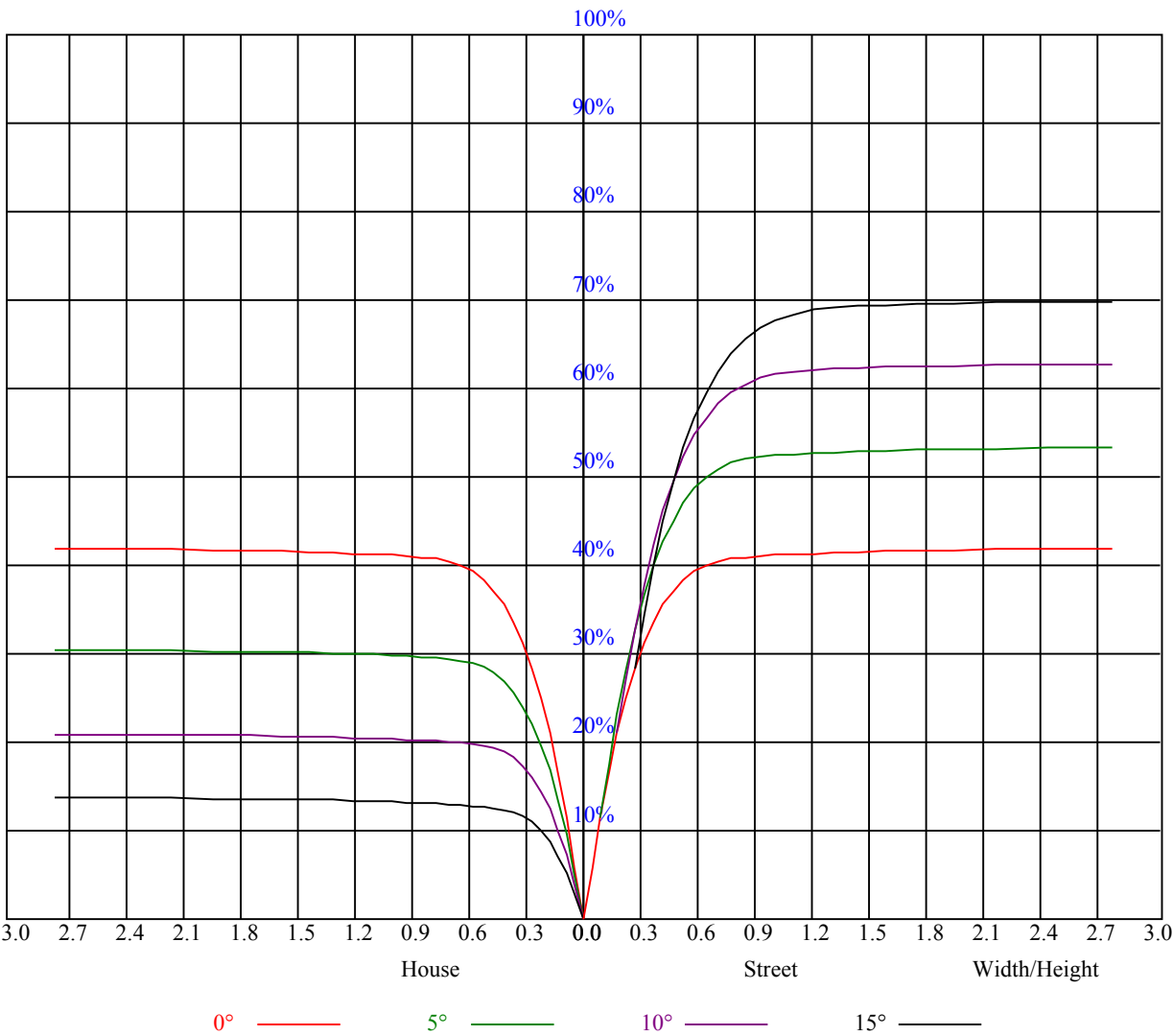
Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

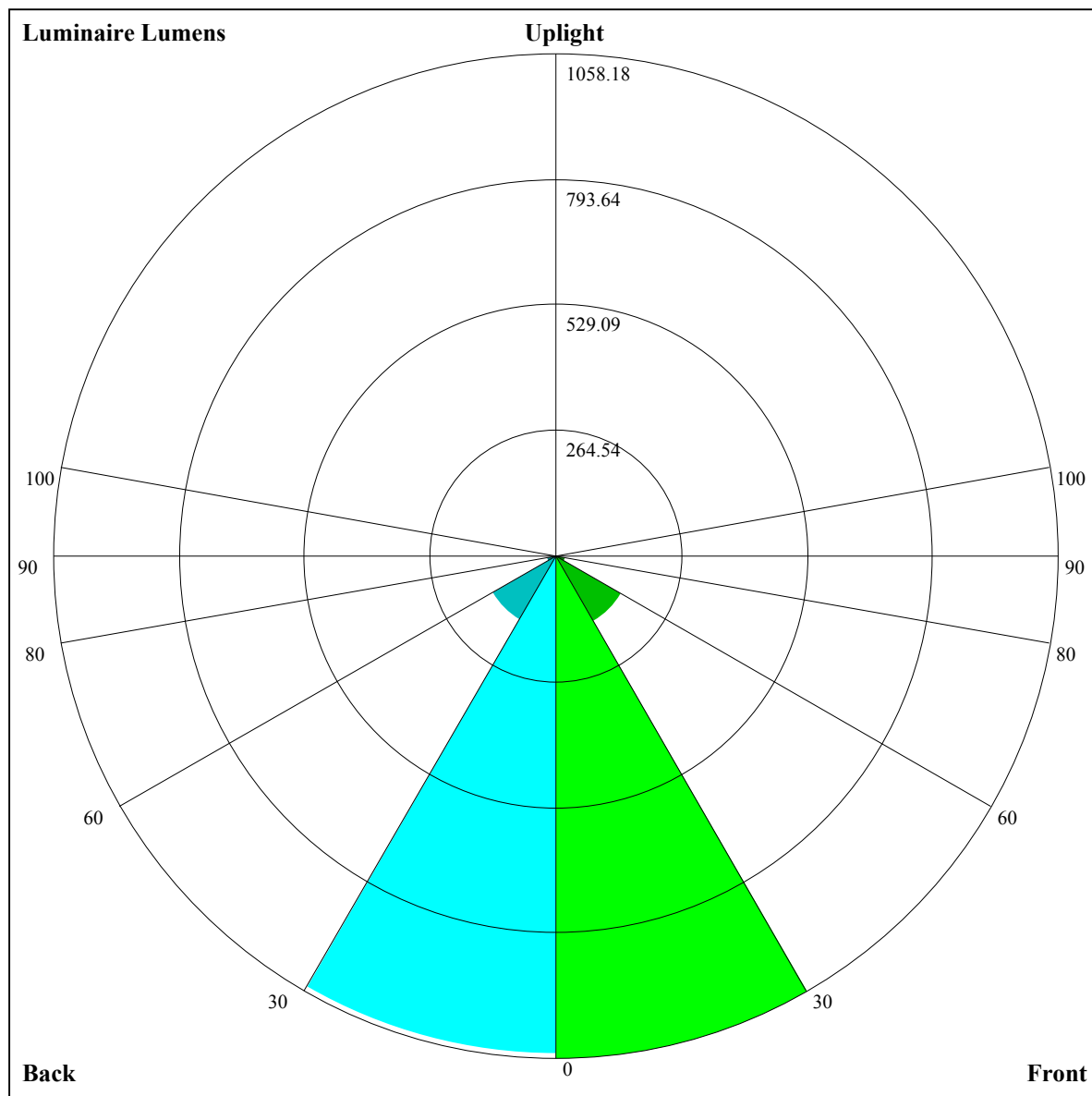
Luminance Limiting Curve





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	COEFFCIENTS OF UTILIZATION RHOFC=20 CU															
0	1.00	1.00	1.00	0.98	0.98	0.98	0.94	0.94	0.94	0.90	0.90	0.90	0.86	0.86	0.86	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	0.88	0.85	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.78	0.80	0.78	0.77	0.76
3	0.84	0.80	0.77	0.82	0.79	0.76	0.80	0.78	0.75	0.78	0.76	0.74	0.76	0.75	0.73	0.72
4	0.79	0.75	0.72	0.78	0.75	0.72	0.77	0.73	0.71	0.75	0.72	0.70	0.74	0.71	0.69	0.68
5	0.76	0.71	0.68	0.75	0.71	0.68	0.73	0.70	0.67	0.72	0.69	0.67	0.71	0.68	0.66	0.65
6	0.72	0.68	0.65	0.71	0.67	0.64	0.70	0.67	0.64	0.69	0.66	0.64	0.68	0.65	0.63	0.62
7	0.69	0.65	0.62	0.68	0.64	0.61	0.67	0.64	0.61	0.66	0.63	0.61	0.66	0.63	0.61	0.59
8	0.66	0.62	0.59	0.66	0.62	0.59	0.65	0.61	0.58	0.64	0.61	0.58	0.63	0.60	0.58	0.57
9	0.63	0.59	0.56	0.63	0.59	0.56	0.62	0.59	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.55
10	0.61	0.57	0.54	0.61	0.57	0.54	0.60	0.56	0.54	0.59	0.56	0.54	0.59	0.56	0.54	0.53





Luminaire Lumens:

FL=1058.18,FM=157.87,FH=19.86,FVH=6.22

BL=1048.44,BM=153.81,BH=19.79,BVH=6.19

UL=0,UH=0

BUG Rating:B3-U0-G0

Intensity data(cd)									Appendix Page: 17 Total:19
C/γ(°)	0.0	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0
0.0	8176.24	8042.81	7805.79	7495.62	7043.83	6665.77	6289.47	5816.02	5447.33
45.0	8118.30	8198.48	8126.49	7866.07	7555.90	7200.08	6726.63	6354.43	5968.18
90.0	8164.53	8039.29	7804.62	7402.57	7043.83	6652.90	6276.60	5803.73	5436.21
135.0	8141.71	8132.35	7982.53	7652.46	7314.20	6944.92	6558.68	6178.28	5711.27
180.0	8176.24	8137.03	7959.12	7679.38	7265.63	6900.45	6520.05	6127.36	5651.58
225.0	8118.30	7854.36	7556.48	7205.35	6839.00	6357.94	5971.69	5590.13	5219.10
270.0	8164.53	8128.25	7946.24	7669.43	7257.43	6888.74	6512.44	6027.88	5644.55
315.0	8141.71	7977.85	7725.61	7404.91	6954.87	6576.82	6190.57	5707.76	5332.04
360.0	8176.24	8042.81	7805.79	7495.62	7043.83	6665.77	6289.47	5816.02	5447.33
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0
0.0	5084.49	4633.87	4296.20	3963.20	3654.20	3307.16	3049.67	2814.99	2606.65
45.0	5507.03	5149.45	4791.88	4367.01	4041.62	3727.36	3441.77	3112.29	2873.51
90.0	5070.45	4714.63	4287.42	3964.96	3591.00	3317.70	3063.71	2777.54	2575.05
135.0	5349.60	4904.83	4561.30	4233.58	3844.99	3551.20	3276.73	2965.39	2739.50
180.0	5292.25	4935.26	4491.66	4162.18	3779.44	3488.00	3215.87	2973.59	2693.26
225.0	4766.13	4426.12	4022.90	3724.43	3438.26	3120.48	2884.63	2668.68	2469.12
270.0	5277.62	4913.02	4468.25	4134.09	3823.33	3531.31	3195.39	2958.96	2688.00
315.0	4961.60	4515.65	4180.32	3863.71	3570.52	3231.09	2986.46	2764.08	2560.42
360.0	5084.49	4633.87	4296.20	3963.20	3654.20	3307.16	3049.67	2814.99	2606.65
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0
0.0	2370.22	2202.85	2051.27	1879.80	1754.56	1611.18	1508.18	1413.96	1158.39
45.0	2655.22	2463.86	2249.66	2091.07	1914.33	1784.41	1665.61	1529.25	1432.10
90.0	2387.19	2180.61	2029.03	1887.41	1758.66	1611.18	1505.26	1409.28	1146.69
135.0	2534.67	2352.08	2145.49	1995.09	1857.56	1733.49	1590.70	1487.12	1388.21
180.0	2493.70	2299.41	2125.60	1934.23	1800.21	1679.07	1542.71	1448.49	1351.34
225.0	2246.74	2082.29	1940.08	1802.55	1655.66	1548.56	1450.83	1145.52	1145.52
270.0	2493.12	2315.21	2103.94	1956.47	1821.28	1700.72	1564.95	1471.90	1378.85
315.0	2328.67	2162.46	2014.40	1843.52	1722.38	1584.85	1484.19	1391.72	1139.61
360.0	2370.22	2202.85	2051.27	1879.80	1754.56	1611.18	1508.18	1413.96	1158.39
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0
0.0	1158.39	1077.17	967.49	829.61	724.10	621.22	522.84	412.06	331.53
45.0	1329.10	1223.76	1085.07	971.53	861.51	752.66	624.49	527.35	434.88
90.0	1146.69	1062.53	951.87	842.49	706.25	601.90	479.36	389.47	309.53
135.0	1257.71	1144.76	1000.21	891.36	781.33	676.58	577.09	459.46	372.85
180.0	1222.01	1116.08	1003.13	859.75	753.24	649.66	527.93	439.56	358.22
225.0	1118.66	1004.60	865.20	755.29	625.02	527.29	436.93	355.52	265.98
270.0	1278.78	1155.29	1038.83	924.13	781.92	671.31	567.73	446.59	361.73
315.0	1139.61	1059.08	946.07	834.30	697.47	593.59	497.68	408.84	310.40
360.0	1158.39	1077.17	967.49	829.61	724.10	621.22	522.84	412.06	331.53
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0
0.0	258.90	197.22	136.12	103.12	84.21	75.14	67.65	60.51	55.77
45.0	331.88	313.15	313.15	127.75	98.67	84.62	73.68	66.60	60.98
90.0	221.92	164.68	120.44	95.33	80.82	72.51	65.72	60.22	54.37
135.0	296.18	296.18	152.45	113.59	92.64	81.00	73.15	66.95	60.34
180.0	302.03	302.03	148.35	112.42	91.76	80.64	72.80	65.60	60.63
225.0	203.72	152.51	115.58	91.94	83.10	75.14	68.82	62.15	57.64
270.0	305.55	305.55	151.81	114.76	91.47	82.52	74.56	68.24	61.74
315.0	242.52	183.82	126.94	99.43	83.51	75.14	68.30	61.39	56.94
360.0	258.90	197.22	136.12	103.12	84.21	75.14	67.65	60.51	55.77

Intensity data(cd)

Appendix Page: 18 Total:19

C/γ(°)	45.0	46.0	47.0	48.0	49.0	50.0	51.0	52.0	53.0
0.0	51.50	47.70	43.60	40.79	38.27	36.05	33.71	32.13	30.78
45.0	56.24	50.97	47.29	43.89	40.26	37.69	35.41	33.59	31.49
90.0	50.21	46.47	42.43	39.62	37.16	34.35	32.60	31.02	29.44
135.0	55.95	51.91	47.40	44.18	41.32	38.04	35.82	34.00	32.07
180.0	56.24	51.27	47.75	44.65	41.84	38.74	36.64	34.70	33.07
225.0	52.49	48.92	45.59	41.90	39.39	37.10	34.70	33.01	31.66
270.0	57.35	53.31	49.63	45.53	42.60	40.03	37.10	35.11	32.95
315.0	52.85	49.22	45.30	42.49	39.85	37.51	35.00	33.30	31.84
360.0	51.50	47.70	43.60	40.79	38.27	36.05	33.71	32.13	30.78

C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	29.44	28.68	28.15	27.86	27.97	28.03	28.21	27.97	27.39
45.0	30.20	29.14	28.15	27.62	27.45	27.51	27.68	28.03	27.80
90.0	28.44	27.74	27.21	27.15	27.33	27.68	28.09	27.92	27.39
135.0	30.78	29.67	28.97	28.44	28.38	28.56	28.91	29.09	28.79
180.0	31.49	30.43	29.79	29.38	29.20	29.32	29.55	29.44	28.91
225.0	30.61	29.79	29.38	29.32	29.38	29.38	29.20	28.50	27.39
270.0	31.60	30.49	29.79	29.26	29.20	29.32	29.44	29.38	28.79
315.0	30.61	29.55	29.03	28.85	28.91	29.03	29.20	28.85	28.15
360.0	29.44	28.68	28.15	27.86	27.97	28.03	28.21	27.97	27.39

C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	25.98	24.52	22.77	21.01	19.55	18.08	17.26	16.80	17.03
45.0	27.39	26.28	24.70	22.65	20.83	19.25	17.97	16.85	16.27
90.0	26.39	24.46	22.65	20.31	18.90	17.67	16.68	16.15	15.74
135.0	27.86	26.39	24.76	22.82	20.60	19.08	17.97	17.09	16.56
180.0	27.68	26.10	24.35	22.36	20.31	18.90	17.85	17.15	16.68
225.0	25.87	23.64	21.71	20.07	18.67	17.50	16.85	16.27	15.80
270.0	27.86	26.34	24.17	22.24	20.48	18.73	17.73	16.85	16.44
315.0	26.86	24.81	22.88	21.07	19.61	18.14	17.38	16.85	16.39
360.0	25.98	24.52	22.77	21.01	19.55	18.08	17.26	16.80	17.03

C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	17.32	17.15	16.74	16.15	15.22	14.57	13.99	13.52	13.05
45.0	15.68	15.33	15.04	14.63	14.40	14.10	13.81	13.40	13.11
90.0	15.74	16.33	16.68	16.97	16.85	16.21	15.10	13.99	12.52
135.0	16.15	15.92	16.15	16.33	16.50	16.44	15.80	14.05	13.28
180.0	17.09	17.15	16.80	16.15	15.39	14.57	14.05	13.46	13.05
225.0	15.39	15.04	14.69	14.34	13.99	13.69	13.28	12.99	12.64
270.0	16.56	16.85	17.38	17.67	17.50	17.09	16.33	15.33	13.93
315.0	16.62	17.44	17.79	18.02	17.97	17.44	16.50	15.27	13.93
360.0	17.32	17.15	16.74	16.15	15.22	14.57	13.99	13.52	13.05

C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	12.58	12.17	11.82	11.53	11.29	11.00	10.71	10.48	10.30
45.0	12.82	12.35	12.06	11.76	11.47	11.24	10.77	10.59	10.42
90.0	12.17	11.82	11.59	11.35	11.00	10.77	10.59	10.42	10.24
135.0	12.76	12.17	11.88	11.70	11.47	10.89	10.65	10.48	10.30
180.0	12.64	12.29	11.82	11.59	11.29	10.94	10.71	10.53	10.30
225.0	12.29	12.00	11.82	11.47	10.94	10.71	10.53	10.36	10.24
270.0	12.70	12.29	11.88	11.70	11.47	10.94	10.65	10.48	10.30
315.0	12.58	12.06	11.76	11.47	11.24	10.77	10.59	10.36	10.18
360.0	12.58	12.17	11.82	11.53	11.29	11.00	10.71	10.48	10.30

Intensity data(cd)

Appendix Page: 19 Total:19

C/ $\gamma(^{\circ})$	90.0
0.0	10.30
45.0	10.24
90.0	10.24
135.0	10.18
180.0	10.30
225.0	10.24
270.0	10.24
315.0	10.18
360.0	10.30