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Nata

Client:

LumCAT: 3-1549-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): 79

Width(mm): 79

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1720.91, Efficiency(%): 83.95% , Luminous Efficacy(lm/W): 112.92

Central intensity(cd): 6546.796, Maximum intensity(cd): 6546.796

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=23.2

[C90/270]Total=23.2

Field angle(10%Imax): [C0/180]Total=57.6

[C90/270]Total=57.6

Maximum s/h(1/2): C0_180=0.39 C90_270=0.39

Maximum s/h(1/4): C0_180=0.41 C90_270=0.41

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 83.95%

Up flux rate of LUM(%): - -

Down flux rate of LUM(%): 100.00%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 98.535%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	6546.797	0.000	0	.000%	.000%
1.0	6487.664	6.237	6.237	.304%	.362%
2.0	6346.336	18.421	24.657	.899%	1.433%
3.0	6120.352	29.816	54.474	1.454%	3.165%
4.0	5871.234	40.140	94.613	1.958%	5.498%
5.0	5615.227	49.414	144.027	2.410%	8.369%
6.0	5287.852	57.299	201.326	2.795%	11.699%
7.0	4944.727	63.513	264.839	3.098%	15.390%
8.0	4625.297	68.491	333.33	3.341%	19.369%
9.0	4236.258	71.818	405.148	3.503%	23.543%
10.0	3843.633	73.120	478.268	3.567%	27.792%
11.0	3495.305	73.331	551.599	3.577%	32.053%
12.0	3126.656	72.388	623.987	3.531%	36.259%
13.0	2750.977	69.753	693.74	3.403%	40.312%
14.0	2443.219	66.485	760.225	3.243%	44.176%
15.0	2147.695	63.026	823.251	3.074%	47.838%
16.0	1882.195	59.049	882.3	2.880%	51.269%
17.0	1649.531	54.998	937.299	2.683%	54.465%
18.0	1443.741	51.001	988.3	2.488%	57.429%
19.0	1278.696	47.365	1035.665	2.310%	60.181%
20.0	1158.110	44.600	1080.265	2.176%	62.773%
21.0	1040.653	42.221	1122.486	2.060%	65.226%
22.0	953.213	40.068	1162.553	1.955%	67.555%
23.0	880.580	38.478	1201.031	1.877%	69.791%
24.0	815.667	37.086	1238.117	1.809%	71.946%
25.0	765.478	35.952	1274.069	1.754%	74.035%
26.0	728.712	35.271	1309.34	1.721%	76.084%
27.0	697.549	34.894	1344.233	1.702%	78.112%
28.0	671.723	34.667	1378.9	1.691%	80.126%
29.0	650.770	34.600	1413.501	1.688%	82.137%
30.0	627.905	34.524	1448.025	1.684%	84.143%
31.0	595.385	34.042	1482.067	1.661%	86.121%
32.0	555.771	32.979	1515.046	1.609%	88.038%
33.0	506.777	31.303	1546.349	1.527%	89.857%
34.0	448.102	28.897	1575.247	1.410%	91.536%
35.0	375.012	25.563	1600.81	1.247%	93.021%
36.0	309.150	21.784	1622.594	1.063%	94.287%
37.0	242.529	17.993	1640.586	.878%	95.333%

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
38.0	178.559	14.055	1654.642	.686%	96.149%
39.0	122.534	10.277	1664.919	.501%	96.746%
40.0	70.376	6.728	1671.647	.328%	97.137%
41.0	42.652	4.025	1675.671	.196%	97.371%
42.0	25.748	2.485	1678.157	.121%	97.516%
43.0	20.067	1.697	1679.854	.083%	97.614%
44.0	17.290	1.410	1681.264	.069%	97.696%
45.0	14.948	1.239	1682.503	.060%	97.768%
46.0	12.811	1.086	1683.588	.053%	97.831%
47.0	11.454	0.965	1684.553	.047%	97.887%
48.0	10.835	0.901	1685.454	.044%	97.940%
49.0	10.554	0.878	1686.333	.043%	97.991%
50.0	10.322	0.870	1687.203	.042%	98.041%
51.0	10.139	0.866	1688.069	.042%	98.092%
52.0	9.935	0.861	1688.93	.042%	98.142%
53.0	9.759	0.857	1689.787	.042%	98.192%
54.0	9.577	0.852	1690.639	.042%	98.241%
55.0	9.429	0.848	1691.487	.041%	98.290%
56.0	9.302	0.846	1692.334	.041%	98.340%
57.0	9.148	0.844	1693.177	.041%	98.389%
58.0	9.028	0.841	1694.018	.041%	98.437%
59.0	8.909	0.839	1694.857	.041%	98.486%
60.0	8.796	0.836	1695.693	.041%	98.535%
61.0	8.698	0.835	1696.528	.041%	98.583%
62.0	8.599	0.833	1697.361	.041%	98.632%
63.0	8.522	0.833	1698.194	.041%	98.680%
64.0	8.459	0.833	1699.027	.041%	98.728%
65.0	8.388	0.834	1699.861	.041%	98.777%
66.0	8.332	0.834	1700.695	.041%	98.825%
67.0	8.283	0.835	1701.531	.041%	98.874%
68.0	8.205	0.835	1702.366	.041%	98.922%
69.0	8.163	0.835	1703.201	.041%	98.971%
70.0	8.128	0.837	1704.038	.041%	99.020%
71.0	8.086	0.838	1704.876	.041%	99.068%
72.0	8.058	0.839	1705.715	.041%	99.117%
73.0	8.009	0.840	1706.555	.041%	99.166%
74.0	7.966	0.840	1707.395	.041%	99.215%
75.0	7.952	0.841	1708.236	.041%	99.264%

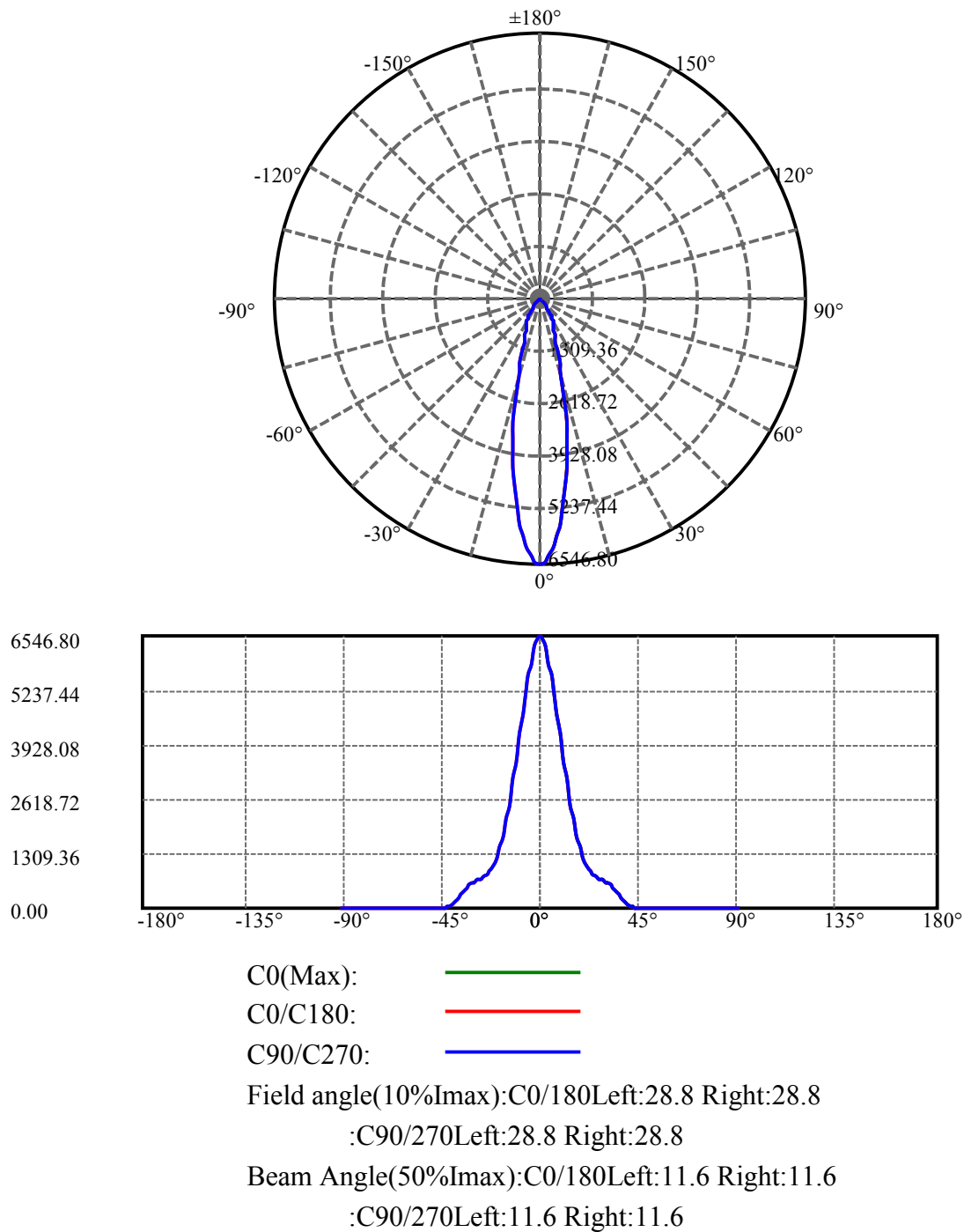
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
76.0	7.910	0.842	1709.078	.041%	99.313%
77.0	7.889	0.842	1709.921	.041%	99.361%
78.0	7.868	0.843	1710.764	.041%	99.410%
79.0	7.847	0.844	1711.608	.041%	99.460%
80.0	7.847	0.846	1712.454	.041%	99.509%
81.0	7.826	0.848	1713.302	.041%	99.558%
82.0	7.805	0.848	1714.15	.041%	99.607%
83.0	7.791	0.848	1714.997	.041%	99.656%
84.0	7.770	0.848	1715.845	.041%	99.706%
85.0	7.755	0.847	1716.692	.041%	99.755%
86.0	7.748	0.847	1717.54	.041%	99.804%
87.0	7.713	0.846	1718.386	.041%	99.853%
88.0	7.685	0.843	1719.23	.041%	99.902%
89.0	7.657	0.841	1720.07	.041%	99.951%
90.0	7.643	0.839	1720.909	.041%	100.000%

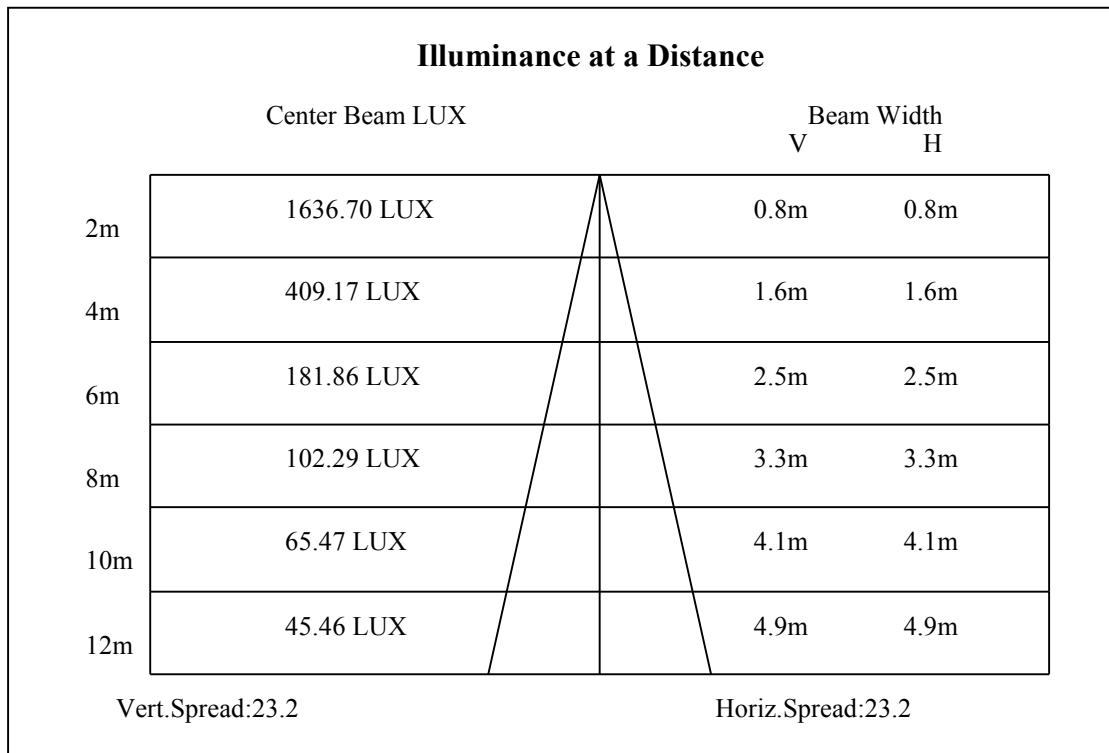
ZONAL LUMEN SUMMARY

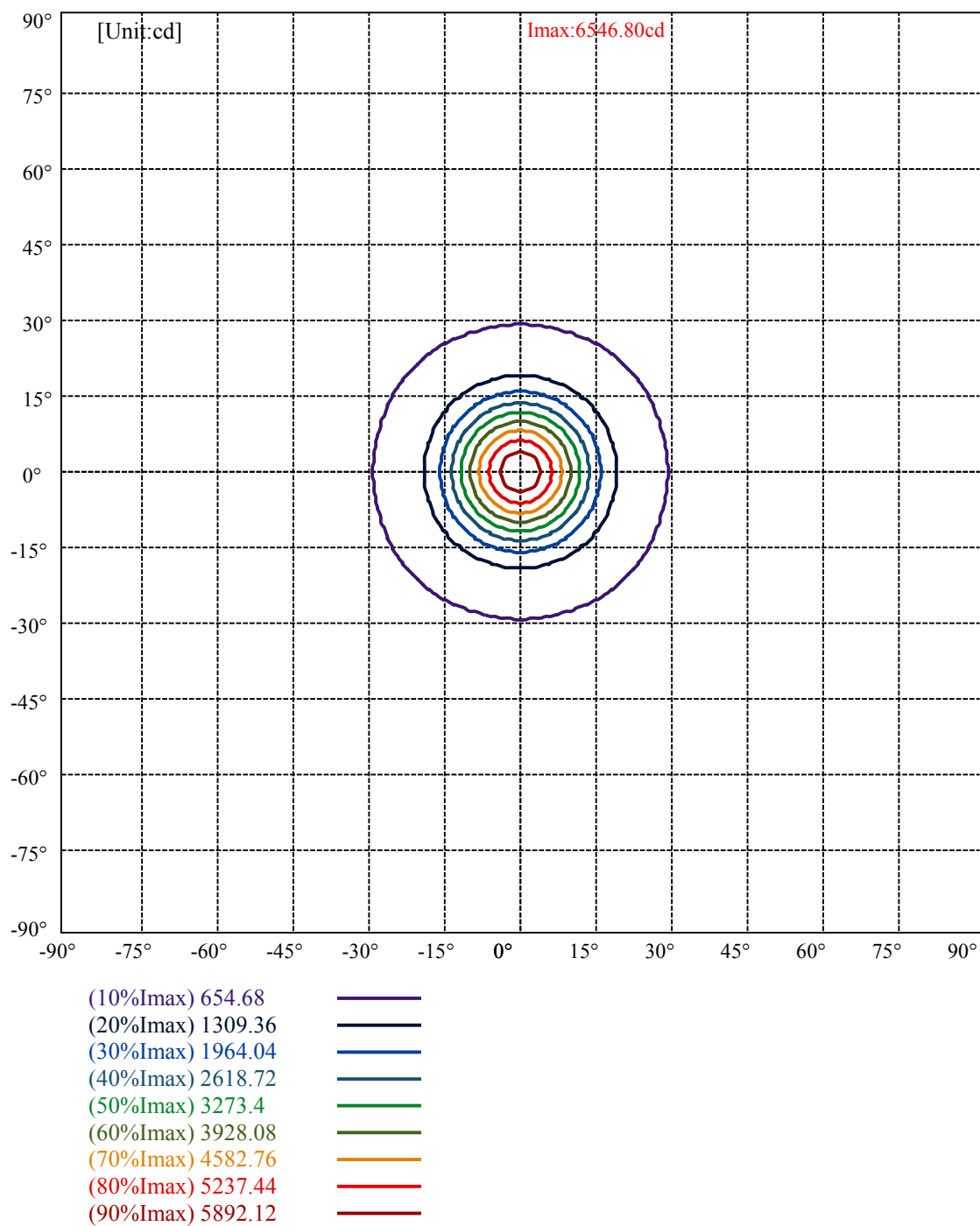
Zone	Lumens	%Lamp	%Fixt
0-30	1448.02	70.64%	84.14%
0-40	1671.65	81.54%	97.14%
0-60	1695.69	82.72%	98.53%
0-90	1720.07	83.91%	99.95%
0-120	1720.07	83.91%	99.95%
0-180	1720.91	83.95%	100.00%
60-90	25.21	1.23%	1.47%
90-120	0.00	0.00%	0.00%
90-130	0.00	0.00%	0.00%
90-150	0.00	0.00%	0.00%
90-180	0.00	0.00%	0.00%
0-27.94	1376.73	67.16%	80.00%

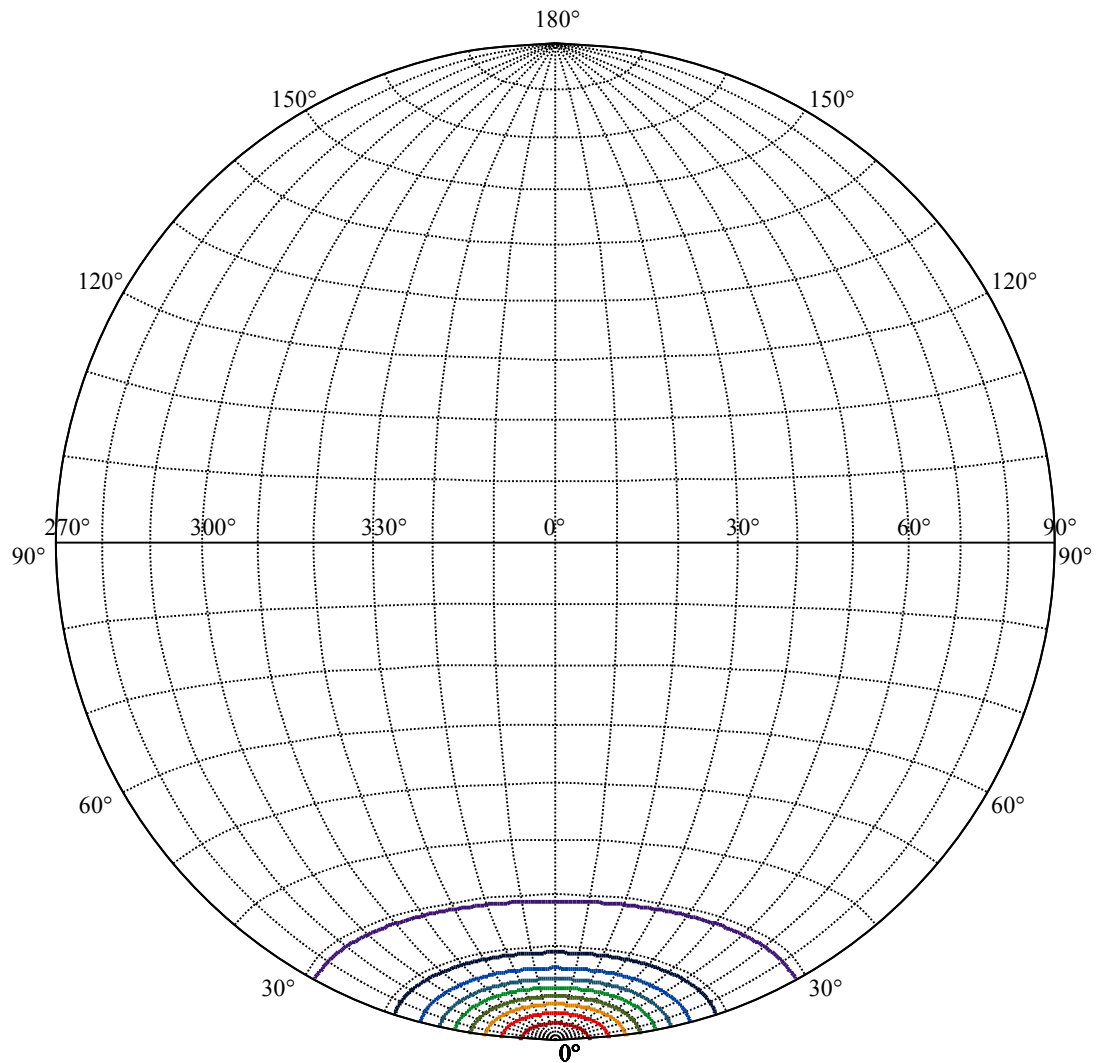
ZONAL LUMEN SUMMARY

0-10	478.27
10-20	602.00
20-30	367.76
30-40	223.62
40-50	15.56
50-60	8.49
60-70	8.34
70-80	8.42
80-90	7.62
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









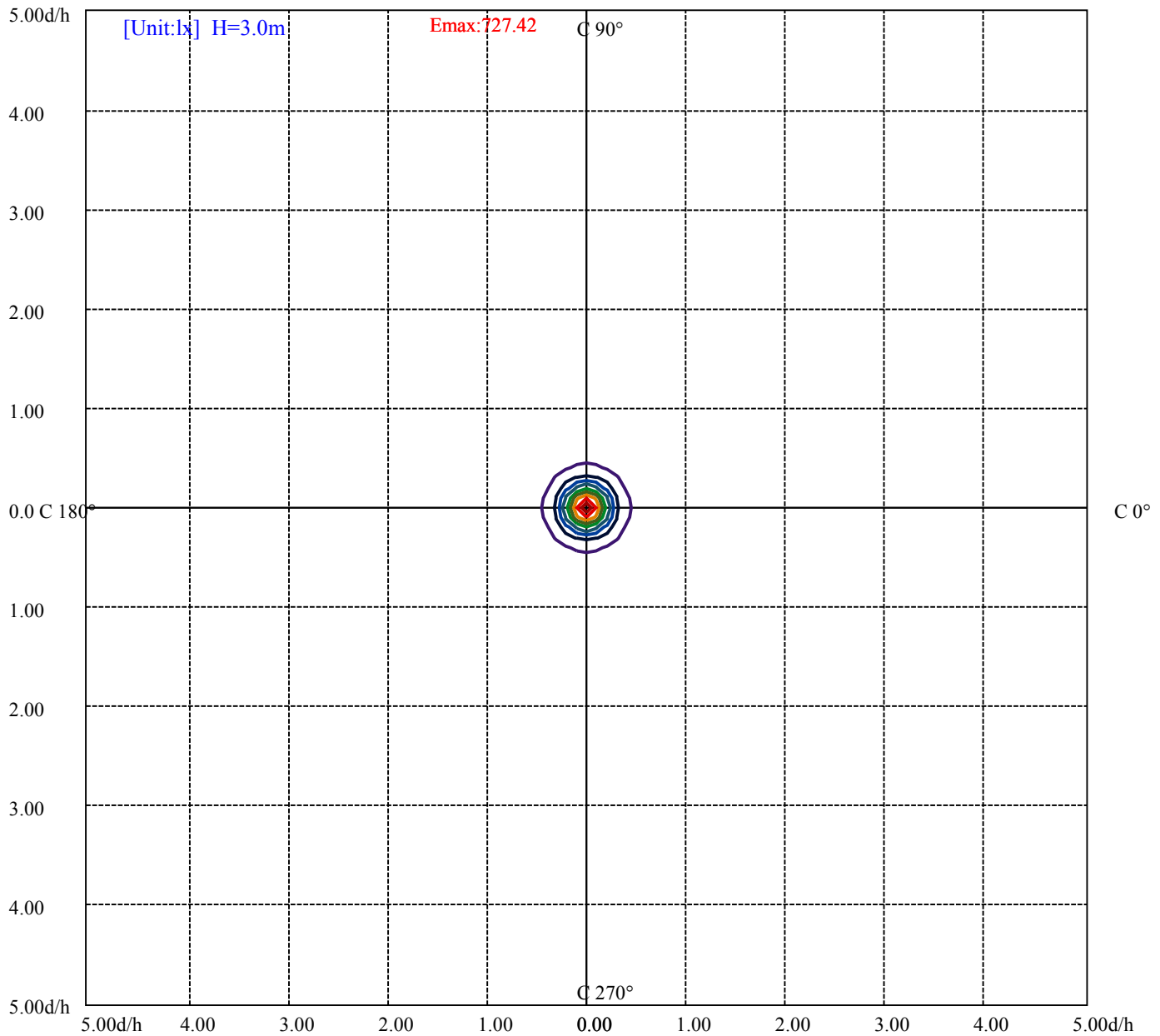
House

[Unit:cd]

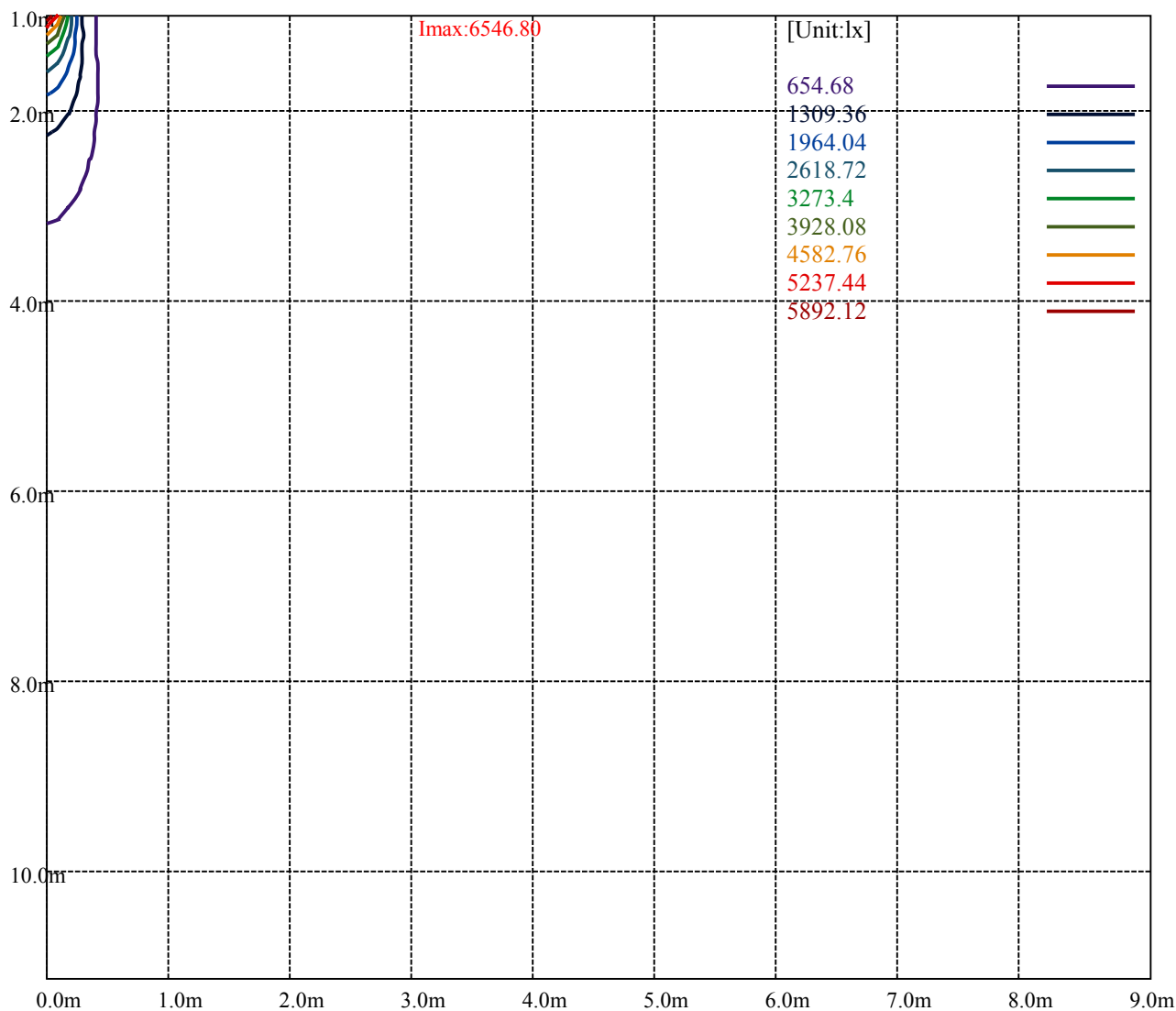
Road

Imax:6546.80

(10%Imax)	654.68	—
(20%Imax)	1309.36	—
(30%Imax)	1964.04	—
(40%Imax)	2618.72	—
(50%Imax)	3273.4	—
(60%Imax)	3928.08	—
(70%Imax)	4582.76	—
(80%Imax)	5237.44	—
(90%Imax)	5892.12	—



(10%Emax)	72.74211	—
(20%Emax)	145.4844	—
(30%Emax)	218.2267	—
(40%Emax)	290.9689	—
(50%Emax)	363.71	—
(60%Emax)	436.4522	—
(70%Emax)	509.1945	—
(80%Emax)	581.9367	—
(90%Emax)	654.6789	—



Luminance Table

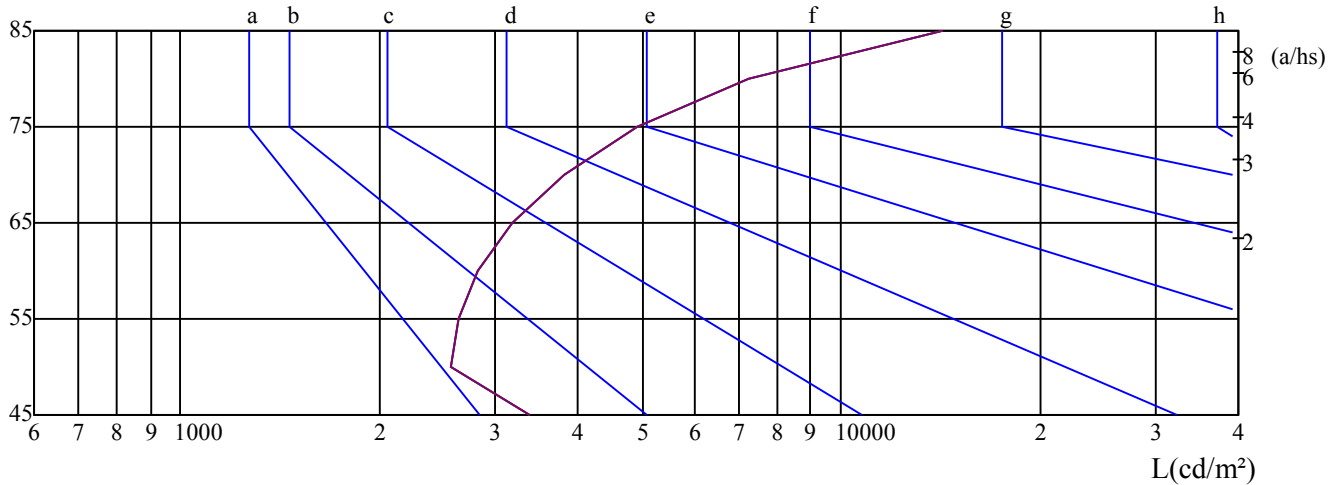
γ	45	50	55	60	65	70	75	80	85
C0	3387	2573	2634	2819	3180	3808	4923	7241	14258
C45	3387	2573	2634	2819	3180	3808	4923	7241	14258
C90	3387	2573	2634	2819	3180	3808	4923	7241	14258

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
3180	3180	3180	4923	4923	4923	14258	14258	14258

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

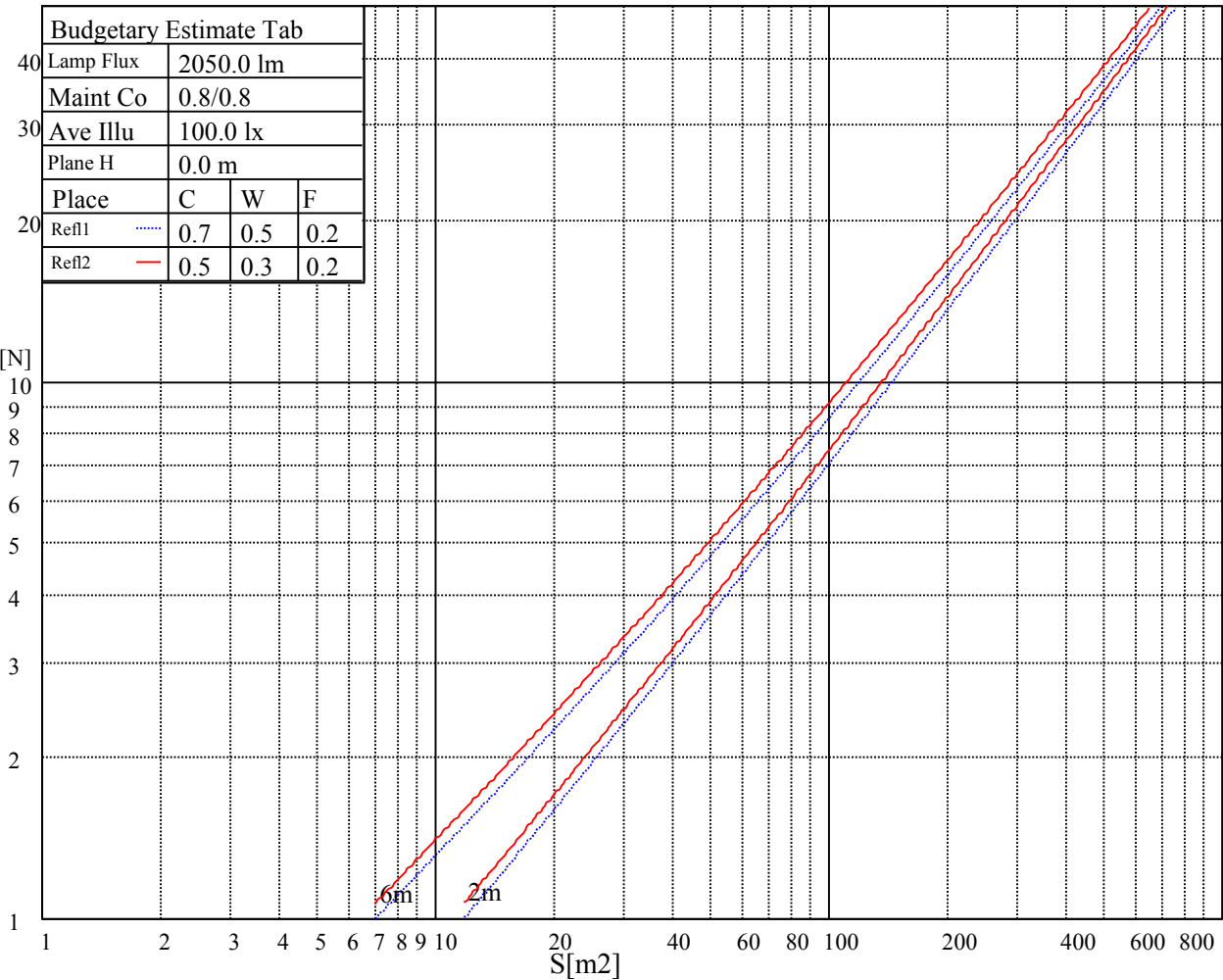
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

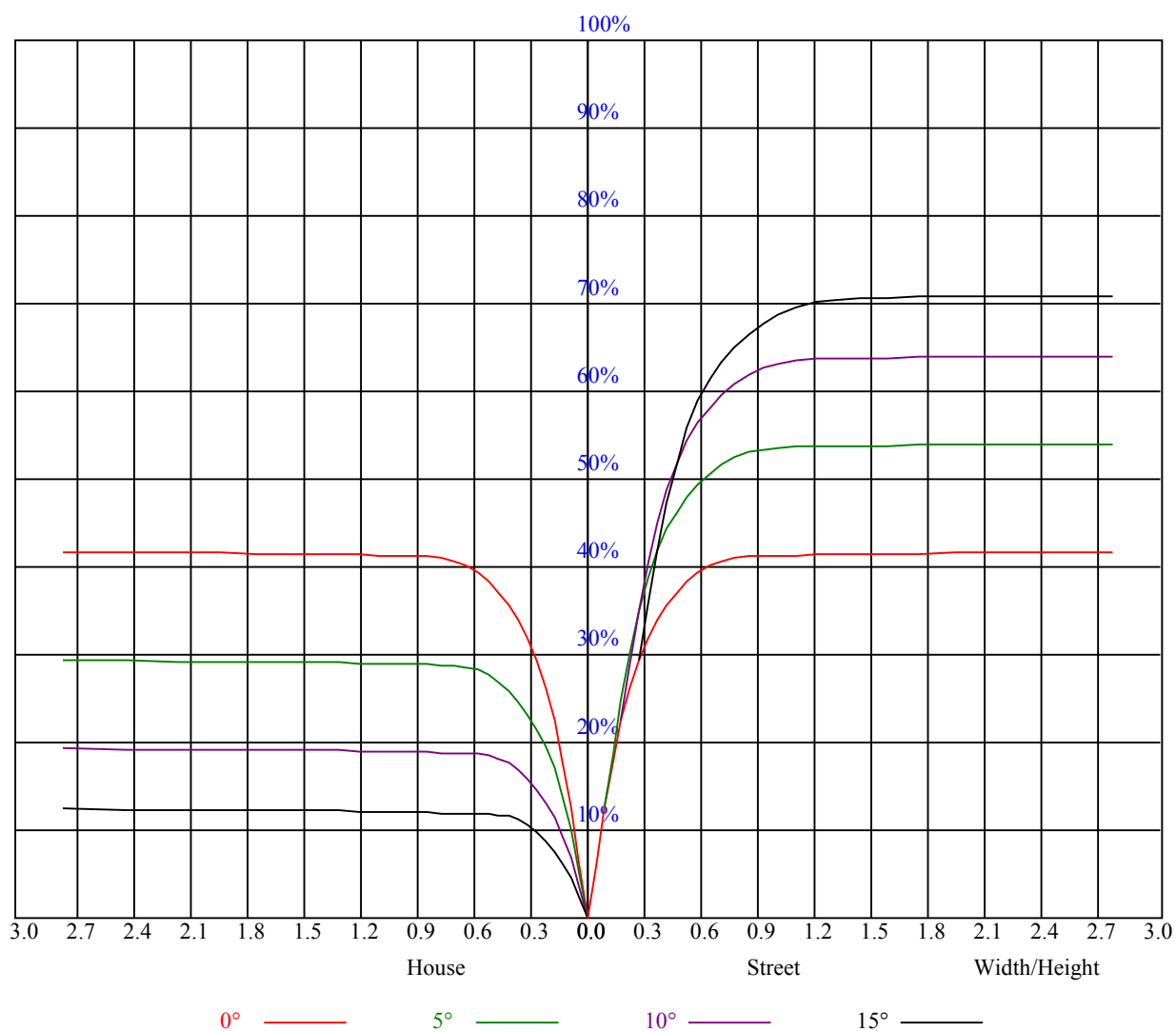
C0 ———

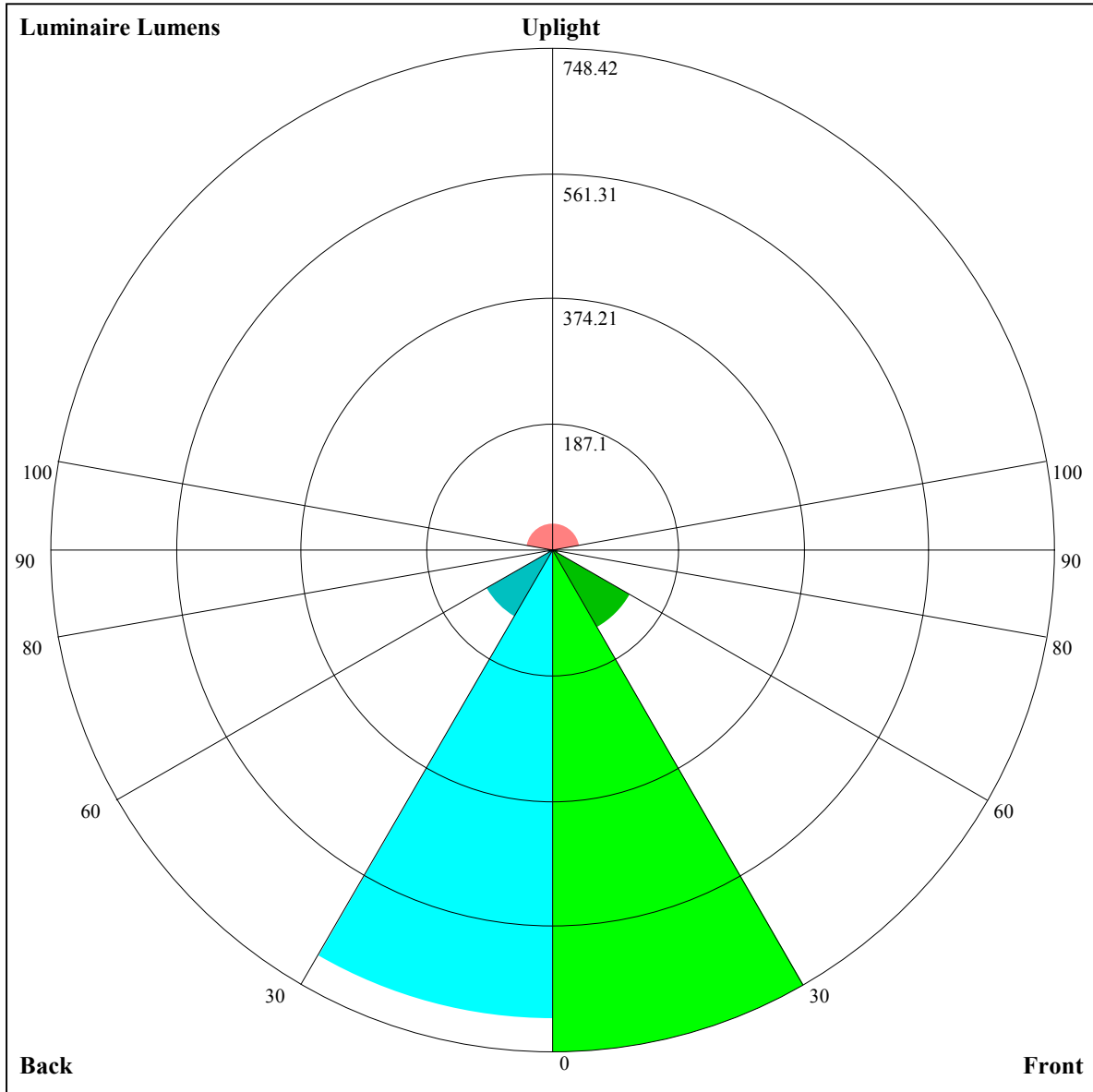
C45 ———

C90 ———



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	1.00	1.00	1.00	0.98	0.98	0.98	0.93	0.93	0.93	0.89	0.89	0.89	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	0.84	0.84	0.83	0.82	0.81	0.80
2	0.89	0.86	0.83	0.87	0.84	0.82	0.84	0.82	0.80	0.82	0.80	0.79	0.80	0.78	0.77	0.76
3	0.84	0.80	0.78	0.83	0.80	0.77	0.81	0.78	0.76	0.79	0.76	0.75	0.77	0.75	0.73	0.72
4	0.80	0.76	0.73	0.79	0.75	0.73	0.77	0.74	0.72	0.76	0.73	0.71	0.74	0.72	0.70	0.69
5	0.76	0.72	0.69	0.75	0.72	0.69	0.74	0.71	0.68	0.73	0.70	0.68	0.71	0.69	0.67	0.66
6	0.73	0.69	0.66	0.72	0.68	0.66	0.71	0.68	0.65	0.70	0.67	0.65	0.69	0.66	0.64	0.63
7	0.70	0.66	0.63	0.69	0.65	0.63	0.68	0.65	0.62	0.67	0.64	0.62	0.67	0.64	0.62	0.61
8	0.67	0.63	0.60	0.67	0.63	0.60	0.66	0.62	0.60	0.65	0.62	0.60	0.64	0.62	0.59	0.59
9	0.65	0.61	0.58	0.64	0.60	0.58	0.64	0.60	0.58	0.63	0.60	0.57	0.62	0.59	0.57	0.56
10	0.62	0.58	0.56	0.62	0.58	0.56	0.61	0.58	0.56	0.61	0.58	0.55	0.60	0.57	0.55	0.54





Luminaire Lumens:

FL=748.42,FM=132.9,FH=8.42,FVH=4.23

BL=700.59,BM=114.44,BH=8.35,BVH=4.23

UL=8.34,UH=39.68

BUG Rating:B2-U2-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	6562.13	6590.81	6487.31	6294.38	6076.13	5832.56	5501.25	5205.94	4892.06		
45.0	6492.38	6607.13	6609.94	6484.50	6316.31	6091.31	5829.75	5560.31	5266.13		
90.0	6570.00	6584.06	6504.19	6323.06	6078.94	5886.00	5601.38	5236.88	4953.94		
135.0	6562.69	6553.69	6433.31	6236.44	6025.50	5794.31	5470.88	5170.50	4848.19		
180.0	6562.13	6415.88	6222.38	5966.44	5686.31	5415.75	5068.13	4692.94	4339.13		
225.0	6492.38	6264.56	6025.50	5736.38	5419.13	5107.50	4775.06	4344.19	4036.50		
270.0	6570.00	6441.75	6234.75	5924.25	5655.38	5365.69	4975.88	4640.06	4299.75		
315.0	6562.69	6443.44	6253.31	5997.38	5712.19	5428.69	5080.50	4707.00	4366.69		
360.0	6562.13	6590.81	6487.31	6294.38	6076.13	5832.56	5501.25	5205.94	4892.06		
C/γ(°)	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.0		
0.0	4475.81	4129.88	3785.63	3395.81	3005.44	2679.75	2343.38	2075.06	1805.06		
45.0	4867.31	4532.63	4174.31	3722.06	3368.81	3022.31	2658.94	2342.81	2076.19		
90.0	4612.50	4124.25	3817.69	3467.81	3085.88	2726.44	2430.00	2128.50	1856.25		
135.0	4426.31	4079.81	3723.19	3331.13	2949.75	2626.88	2290.50	2037.94	1766.81		
180.0	3984.75	3540.94	3195.00	2863.13	2478.38	2199.94	1947.38	1686.38	1464.19		
225.0	3641.63	3251.25	2873.25	2554.31	2184.75	1925.44	1701.00	1461.94	1326.94		
270.0	3862.69	3510.56	3162.94	2785.50	2432.81	2147.06	1855.13	1629.56	1422.56		
315.0	4019.06	3579.75	3230.44	2893.50	2502.00	2217.94	1955.25	1695.38	1478.25		
360.0	4475.81	4129.88	3785.63	3395.81	3005.44	2679.75	2343.38	2075.06	1805.06		
C/γ(°)	18.0	19.0	20.0	21.0	22.0	23.0	24.0	25.0	26.0		
0.0	1574.44	1400.06	1240.31	1109.81	1016.44	939.38	859.50	806.63	763.88		
45.0	1807.31	1598.63	1399.50	1238.63	1105.31	999.00	911.25	844.88	792.00		
90.0	1640.81	1430.44	1273.50	1110.83	1020.77	927.39	860.79	798.08	747.90		
135.0	1531.69	1366.88	1206.56	1078.31	980.44	905.06	825.75	775.69	737.44		
180.0	1305.56	1115.44	1051.99	953.10	873.06	814.33	761.12	720.34	691.88		
225.0	1111.61	1062.90	977.96	899.72	835.59	785.48	743.51	705.15	681.81		
270.0	1258.31	1143.00	1038.38	953.44	891.00	829.13	773.44	732.94	702.56		
315.0	1320.19	1112.23	1076.68	981.39	903.09	844.88	789.98	740.14	712.24		
360.0	1574.44	1400.06	1240.31	1109.81	1016.44	939.38	859.50	806.63	763.88		
C/γ(°)	27.0	28.0	29.0	30.0	31.0	32.0	33.0	34.0	35.0		
0.0	727.88	699.75	675.56	652.50	631.13	612.56	569.25	515.25	446.63		
45.0	741.94	712.13	691.31	666.56	643.50	626.63	608.06	569.25	511.31		
90.0	716.46	691.03	666.90	646.14	627.13	605.31	573.30	524.19	459.90		
135.0	702.00	680.06	657.00	636.19	612.00	592.88	550.69	488.25	412.88		
180.0	668.59	641.31	623.48	606.66	571.67	512.27	453.04	388.91	306.90		
225.0	658.41	639.23	617.01	580.16	522.23	454.28	385.65	315.23	238.89		
270.0	677.81	653.63	635.06	613.13	566.44	510.19	440.44	383.06	298.13		
315.0	687.32	656.66	639.84	621.90	588.99	532.07	473.79	400.67	325.46		
360.0	727.88	699.75	675.56	652.50	631.13	612.56	569.25	515.25	446.63		
C/γ(°)	36.0	37.0	38.0	39.0	40.0	41.0	42.0	43.0	44.0		
0.0	372.94	304.88	288.00	159.19	96.53	51.58	29.14	24.75	20.70		
45.0	448.31	383.06	302.63	285.19	159.30	101.70	50.23	28.07	23.57		
90.0	386.33	319.05	244.46	172.63	114.47	59.91	28.63	21.94	17.44		
135.0	349.31	293.63	198.96	148.73	81.28	40.33	21.77	18.73	15.86		
180.0	242.10	180.68	117.96	64.86	30.15	22.73	19.86	17.04	15.47		
225.0	168.36	112.39	61.37	32.57	23.40	20.48	17.83	16.65	14.74		
270.0	247.33	154.74	91.91	49.73	24.58	20.98	18.28	15.98	14.91		
315.0	258.53	191.81	123.19	67.39	33.30	23.51	20.25	17.38	15.64		
360.0	372.94	304.88	288.00	159.19	96.53	51.58	29.14	24.75	20.70		

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	18.45	15.64	12.15	11.76	11.31	11.03	10.80	10.52	10.29
45.0	19.01	16.48	14.51	11.64	11.19	10.97	10.74	10.46	10.24
90.0	15.02	13.56	11.19	10.80	10.52	10.24	10.07	9.90	9.73
135.0	14.46	12.49	10.69	10.41	10.18	9.96	9.84	9.62	9.51
180.0	13.50	10.58	10.35	10.13	10.01	9.79	9.68	9.51	9.39
225.0	11.31	10.74	10.41	10.18	10.01	9.84	9.68	9.51	9.34
270.0	13.67	11.31	10.97	10.69	10.41	10.24	10.01	9.84	9.68
315.0	14.18	11.70	11.36	11.08	10.80	10.52	10.29	10.13	9.90
360.0	18.45	15.64	12.15	11.76	11.31	11.03	10.80	10.52	10.29
C/γ(°)	54.0	55.0	56.0	57.0	58.0	59.0	60.0	61.0	62.0
0.0	10.07	9.84	9.68	9.51	9.34	9.17	9.06	8.89	8.78
45.0	10.01	9.84	9.68	9.51	9.34	9.23	9.06	8.94	8.83
90.0	9.51	9.39	9.28	9.11	9.00	8.89	8.78	8.72	8.61
135.0	9.39	9.23	9.11	9.00	8.89	8.78	8.72	8.61	8.49
180.0	9.23	9.11	9.06	8.89	8.83	8.72	8.61	8.55	8.49
225.0	9.23	9.11	9.00	8.89	8.78	8.72	8.61	8.55	8.44
270.0	9.51	9.34	9.23	9.06	8.94	8.83	8.72	8.61	8.55
315.0	9.68	9.56	9.39	9.23	9.11	8.94	8.83	8.72	8.61
360.0	10.07	9.84	9.68	9.51	9.34	9.17	9.06	8.89	8.78
C/γ(°)	63.0	64.0	65.0	66.0	67.0	68.0	69.0	70.0	71.0
0.0	8.66	8.61	8.49	8.44	8.33	8.27	8.21	8.21	8.16
45.0	8.72	8.61	8.55	8.49	8.38	8.33	8.33	8.21	8.21
90.0	8.55	8.44	8.38	8.33	8.33	8.21	8.16	8.16	8.10
135.0	8.44	8.44	8.33	8.27	8.21	8.16	8.16	8.10	8.04
180.0	8.44	8.38	8.33	8.27	8.27	8.16	8.10	8.10	8.04
225.0	8.38	8.33	8.33	8.27	8.21	8.16	8.10	8.04	8.04
270.0	8.49	8.44	8.33	8.27	8.27	8.21	8.16	8.10	8.04
315.0	8.49	8.44	8.38	8.33	8.27	8.16	8.10	8.10	8.04
360.0	8.66	8.61	8.49	8.44	8.33	8.27	8.21	8.21	8.16
C/γ(°)	72.0	73.0	74.0	75.0	76.0	77.0	78.0	79.0	80.0
0.0	8.10	8.04	7.99	7.99	7.93	7.88	7.88	7.88	7.88
45.0	8.16	8.10	8.04	8.04	7.99	7.93	7.93	7.88	7.88
90.0	8.10	8.04	7.99	7.99	7.93	7.93	7.88	7.88	7.88
135.0	8.04	7.99	7.93	7.93	7.93	7.88	7.88	7.82	7.82
180.0	8.04	7.99	7.93	7.93	7.93	7.88	7.88	7.82	7.82
225.0	7.99	7.93	7.93	7.93	7.88	7.88	7.88	7.82	7.82
270.0	8.04	8.04	7.99	7.93	7.93	7.93	7.88	7.88	7.88
315.0	7.99	7.93	7.93	7.88	7.82	7.82	7.82	7.82	7.82
360.0	8.10	8.04	7.99	7.99	7.93	7.88	7.88	7.88	7.88
C/γ(°)	81.0	82.0	83.0	84.0	85.0	86.0	87.0	88.0	89.0
0.0	7.82	7.82	7.82	7.76	7.76	7.71	7.71	7.71	7.65
45.0	7.88	7.82	7.82	7.76	7.76	7.76	7.71	7.71	7.71
90.0	7.88	7.82	7.88	7.82	7.76	7.71	7.71	7.65	7.65
135.0	7.82	7.82	7.76	7.76	7.76	7.71	7.71	7.71	7.65
180.0	7.82	7.76	7.76	7.76	7.76	7.82	7.88	7.76	7.65
225.0	7.82	7.82	7.76	7.76	7.76	7.76	7.65	7.65	7.65
270.0	7.82	7.82	7.76	7.82	7.76	7.76	7.71	7.65	7.65
315.0	7.76	7.76	7.76	7.71	7.71	7.76	7.65	7.65	7.65
360.0	7.82	7.82	7.82	7.76	7.76	7.71	7.71	7.71	7.65

Intensity data(cd)

Appendix Page: 19 Total:19

C/ $\gamma(^{\circ})$	90.0
0.0	7.65
45.0	7.65
90.0	7.65
135.0	7.65
180.0	7.65
225.0	7.65
270.0	7.65
315.0	7.59
360.0	7.65