AFX

Client:
LumCAT: ELZP42LAJD4**
Luminaire: LED Lamp
Report No:
Ballast type:

Test No:	Voltage(V): 120.000
LampCAT:	Current(A): 0.205
Lamp flux(lm): 2170.2	Power (W): 24.210
Number of Lamps: 1	PF: 0.986
Length(mm): 1040	Width(mm): 15
Phm Type: C	Height(mm): 10

Photometric Results

Lumens(lm): 2170.21, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 89.64
Central intensity(cd): 590.495, Maximum intensity(cd): 592.739
Angle of maximum intensity: C=75.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=108.8
[C90/270]Total=134.3
Field angle(10%Imax): [C0/180]Total=158.6
[C90/270]Total=238.1
Maximum s/h(1/2): C0_180=1.23 C90_270=1.34
Maximum s/h(1/4): C0_180=1.35 C90_270=1.49
Up flux rate of lamp(%): 10.47%
Down flux rate of lamp(%): 89.53%
Up flux rate of LUM(%): 10.47%
Down flux rate of LUM(%): 89.53%
CIE Type : Semidirect lighting
Output flux ratio in π solid angle : 62.720%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	590.495	0.000	0	0.00%	0.00%
5.0	587.762	14.086	14.086	0.65%	0.65%
10.0	579.931	41.772	55.858	1.92%	2.57%
15.0	566.736	68.019	123.877	3.13%	5.71%
20.0	549.243	91.972	215.85	4.24%	9.95%
25.0	526.806	112.858	328.707	5.20%	15.15%
30.0	500.875	130.054	458.761	5.99%	21.14%
35.0	471.462	143.183	601.945	6.60%	27.74%
40.0	439.375	151.966	753.911	7.00%	34.74%
45.0	403.850	156.130	910.041	7.19%	41.93%
50.0	367.047	155.771	1065.811	7.18%	49.11%
55.0	329.605	151.475	1217.287	6.98%	56.09%
60.0	292.831	143.874	1361.161	6.63%	62.72%
65.0	254.099	132.960	1494.121	6.13%	68.85%
70.0	217.153	119.324	1613.445	5.50%	74.35%
75.0	182.438	104.447	1717.892	4.81%	79.16%
80.0	151.329	89.307	1807.199	4.12%	83.27%
85.0	123.211	74.599	1881.798	3.44%	86.71%
90.0	100.624	61.288	1943.085	2.82%	89.53%
95.0	82.326	50.093	1993.179	2.31%	91.84%
100.0	67.539	40.722	2033.901	1.88%	93.72%
105.0	54.983	32.784	2066.684	1.51%	95.23%
110.0	44.410	25.980	2092.664	1.20%	96.43%
115.0	35.552	20.247	2112.911	0.93%	97.36%
120.0	28.448	15.558	2128.469	0.72%	98.08%
125.0	22.179	11.702	2140.172	0.54%	98.62%
130.0	17.231	8.569	2148.741	0.39%	99.01%
135.0	13.377	6.185	2154.925	0.28%	99.30%
140.0	10.688	4.456	2159.381	0.21%	99.50%
145.0	8.836	3.257	2162.639	0.15%	99.65%
150.0	7.615	2.423	2165.061	0.11%	99.76%
155.0	6.861	1.832	2166.893	0.08%	99.85%
160.0	6.002	1.349	2168.242	0.06%	99.91%
165.0	5.453	0.944	2169.186	0.04%	99.95%
170.0	4.743	0.605	2169.791	0.03%	99.98%
175.0	4.594	0.334	2170.125	0.02%	100.00%
180.0	2.206	0.081	2170.206	0.00%	100.00%

Zonal flux distribution table

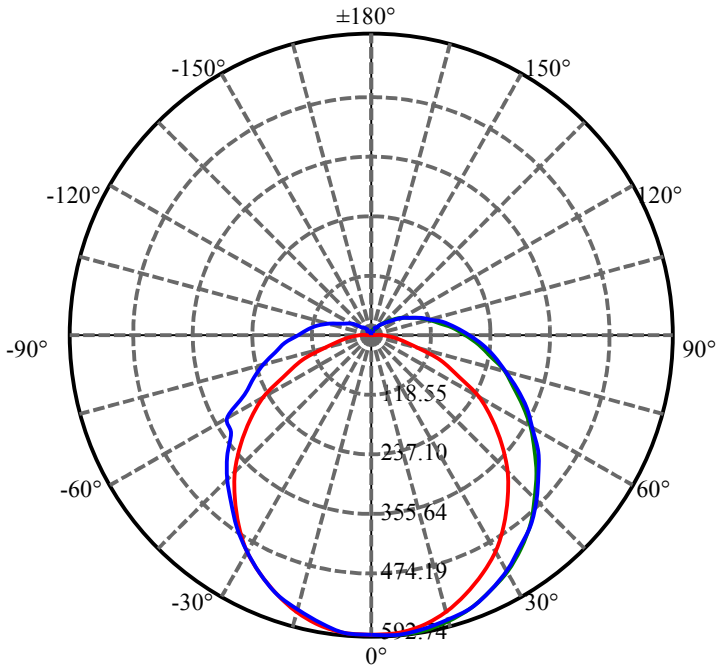
ZONAL LUMEN SUMMARY

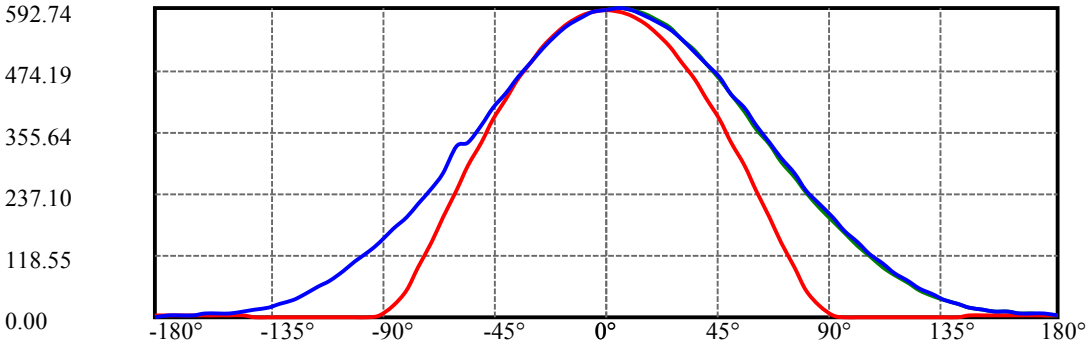
Zone	Lumens	%Lamp	%Fixt
0-30	458.76	21.14%	21.14%
0-40	753.91	34.74%	34.74%
0-60	1361.16	62.72%	62.72%
0-90	1943.09	89.53%	89.53%
0-120	2128.47	98.08%	98.08%
0-180	2170.21	100.00%	100.00%
60-90	581.92	26.81%	26.81%
90-120	185.38	8.54%	8.54%
90-130	205.66	9.48%	9.48%
90-150	221.98	10.23%	10.23%
90-180	227.04	10.46%	10.46%
0-76.02	1736.17	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	55.86
10-20	159.99
20-30	242.91
30-40	295.15
40-50	311.90
50-60	295.35
60-70	252.28
70-80	193.75
80-90	135.89
90-100	90.82
100-110	58.76
110-120	35.81
120-130	20.27
130-140	10.64
140-150	5.68
150-160	3.18
160-170	1.55
170-180	0.33

Light Distribution Curve [Unit:cd]





C75(Max):

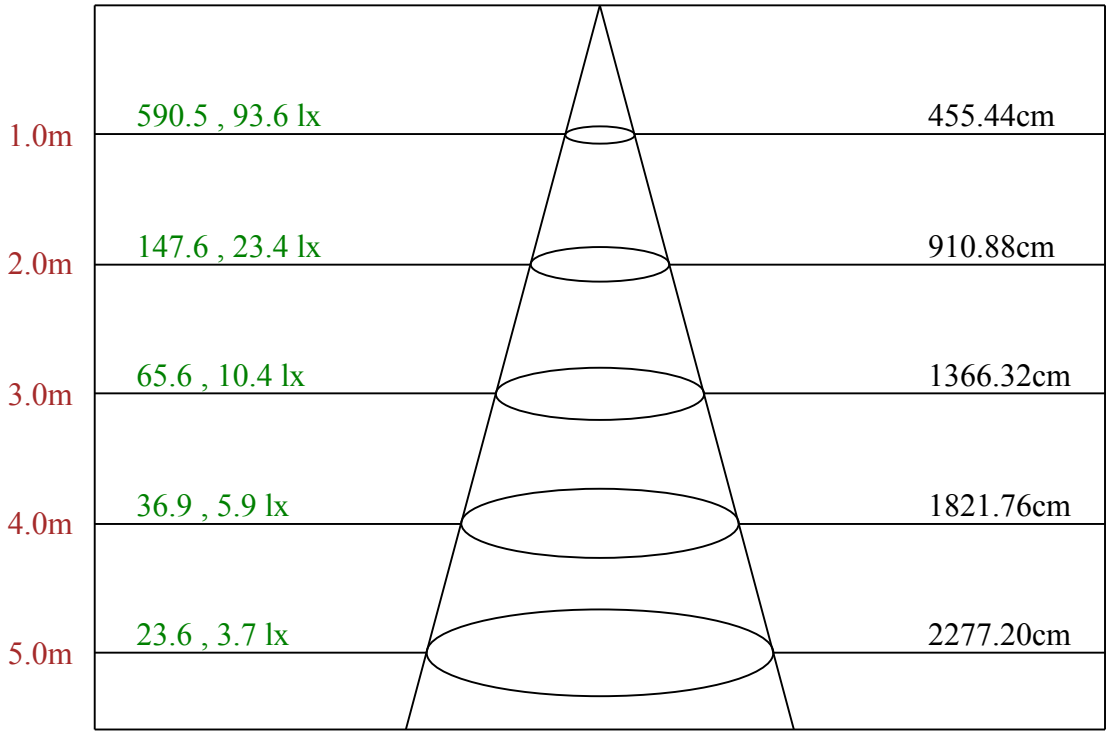
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:79.3 Right:79.3
:C90/270Left:119.4 Right:118.7

Beam Angle(50%Imax):C0/180Left:54.4 Right:54.4
:C90/270Left:68.0 Right:66.3

Lux distance Curve



Max , Ave

Beam angle of C75 plane 132.58

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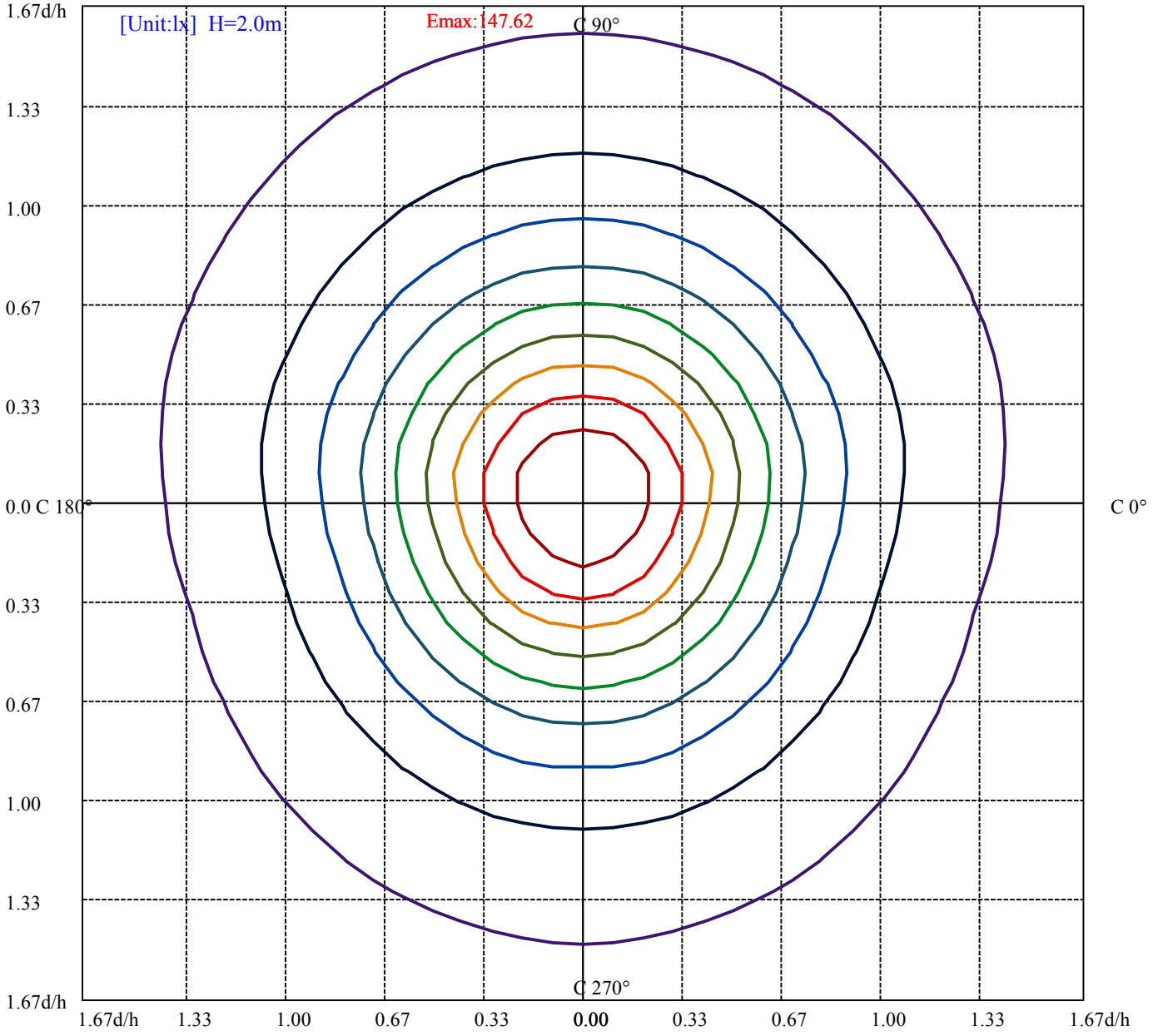
ISO illuminance diagram

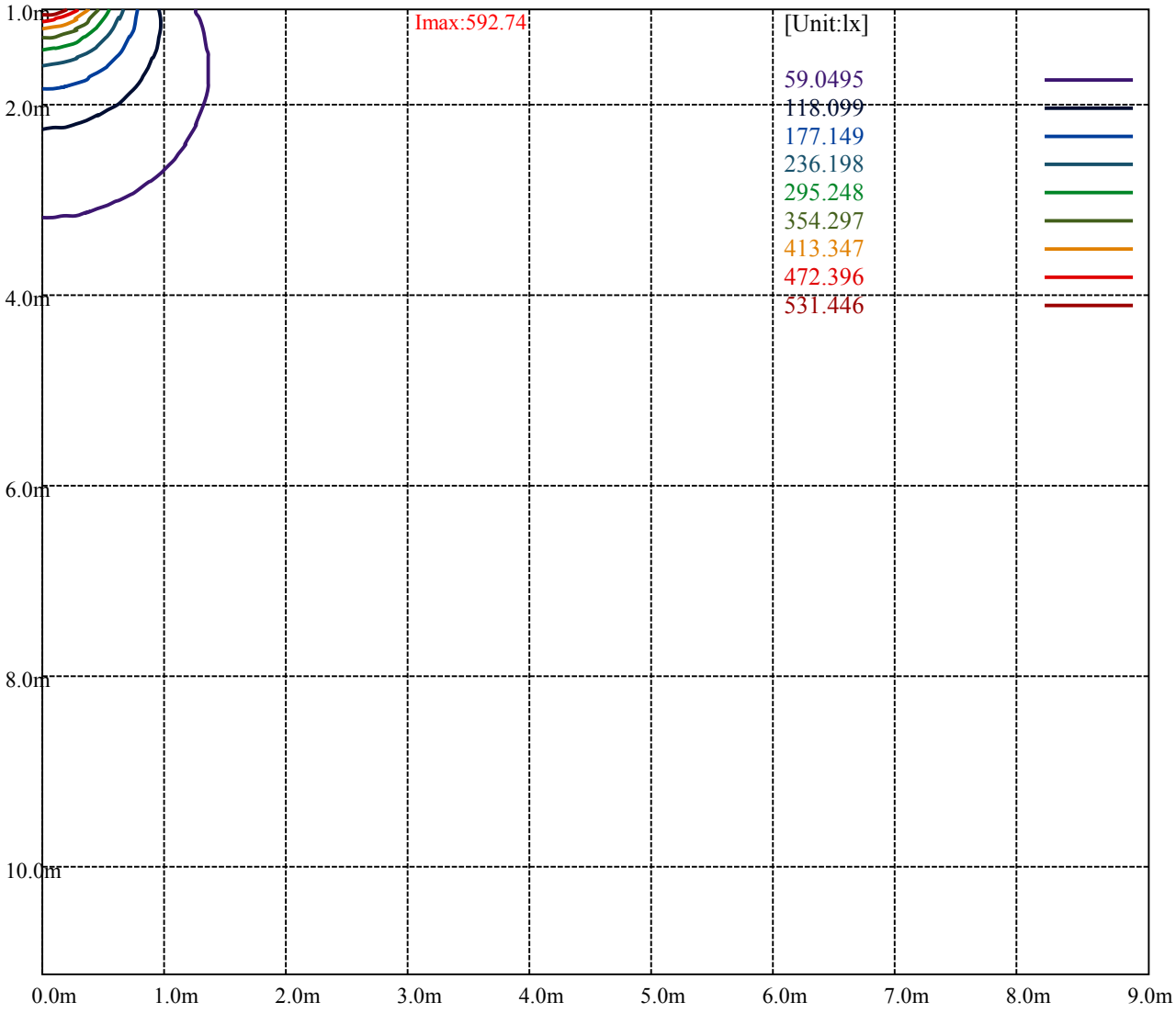


Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.1

Date: 2025/6/28
Humidity(%): 61.6%

Operator: JUN WANG
Distance(m): 29.95

Space ISO Lux diagram



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Operator: JUN WANG
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Luminance Limitting Curve(no luminous side)

Luminance Table

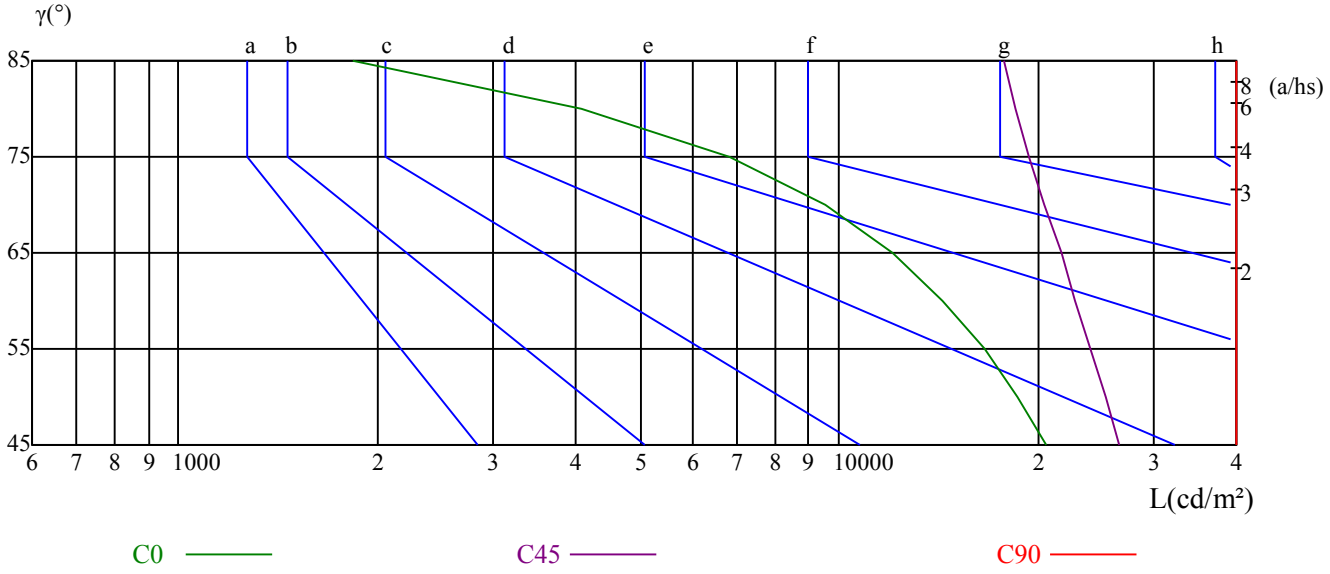
γ	45	50	55	60	65	70	75	80	85
C0	20596	18599	16599	14400	12048	9549	6823	4069	1840
C45	26597	25306	23975	22737	21686	20473	19423	18500	17782
C90	41288	42184	44056	46305	49885	55568	65584	85611	144540

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
29273	46314	39444	23800	60914	47580	15863	142491	99375

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 Limitting Curve



Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.1

Date: 2025/6/28
Humidity(%): 61.6%

Operator: JUN WANG
Distance(m): 29.95

Utilization factor table for indoor luminaire

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	1.17	1.17	1.17	1.13	1.13	1.13	1.05	1.05	1.05	0.99	0.99	0.99	0.92	0.92	0.92	0.90
1	0.98	0.93	0.89	0.95	0.90	0.86	0.89	0.85	0.82	0.83	0.80	0.77	0.78	0.75	0.73	0.70
2	0.85	0.77	0.71	0.82	0.75	0.69	0.76	0.71	0.66	0.72	0.67	0.63	0.67	0.63	0.60	0.57
3	0.74	0.65	0.58	0.71	0.63	0.57	0.67	0.60	0.54	0.63	0.57	0.52	0.59	0.54	0.50	0.47
4	0.65	0.56	0.49	0.63	0.54	0.48	0.59	0.52	0.46	0.55	0.49	0.44	0.52	0.47	0.42	0.40
5	0.58	0.48	0.42	0.56	0.47	0.41	0.53	0.45	0.39	0.50	0.43	0.38	0.47	0.41	0.37	0.34
6	0.52	0.43	0.36	0.50	0.42	0.35	0.47	0.40	0.34	0.45	0.38	0.33	0.42	0.37	0.32	0.30
7	0.47	0.38	0.32	0.46	0.37	0.31	0.43	0.36	0.30	0.41	0.34	0.29	0.39	0.33	0.28	0.26
8	0.43	0.34	0.28	0.42	0.33	0.28	0.39	0.32	0.27	0.37	0.31	0.26	0.35	0.30	0.25	0.23
9	0.39	0.31	0.25	0.38	0.30	0.25	0.36	0.29	0.24	0.34	0.28	0.23	0.33	0.27	0.23	0.21
10	0.36	0.28	0.23	0.35	0.28	0.22	0.33	0.27	0.22	0.32	0.26	0.21	0.30	0.25	0.21	0.19

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	590.50	591.75	588.89	576.92	561.20	538.16	512.89	481.81	447.60
15.0	590.50	592.66	588.33	579.51	564.84	544.04	518.74	489.84	456.53
30.0	590.50	592.47	588.52	578.84	564.24	544.97	520.68	491.65	459.74
45.0	590.50	592.65	590.59	582.94	570.25	551.81	529.58	504.03	474.88
60.0	590.50	592.30	590.59	585.73	573.31	556.30	535.33	509.69	482.87
75.0	590.50	593.82	592.29	585.10	573.59	558.22	538.53	513.81	488.90
90.0	590.50	592.73	588.35	578.17	568.61	553.70	533.60	509.48	485.45
105.0	590.50	591.66	587.28	579.87	567.99	551.47	530.57	509.14	481.54
120.0	590.50	590.41	587.55	578.79	565.57	547.08	525.28	500.36	471.86
135.0	590.50	589.69	584.84	574.88	560.88	540.41	516.72	489.79	457.84
150.0	590.50	591.13	585.90	574.09	541.63	536.49	510.08	479.25	445.26
165.0	590.50	589.96	582.22	569.99	551.64	529.15	501.99	469.43	429.40
180.0	590.50	582.55	569.24	549.86	526.64	498.33	465.47	430.19	390.72
195.0	590.50	583.92	570.87	551.96	528.65	497.86	466.89	430.79	389.73
210.0	590.50	581.71	566.84	548.55	523.55	497.11	464.22	431.51	392.08
225.0	590.50	581.23	569.62	550.82	529.22	503.31	472.45	440.15	405.69
240.0	590.50	583.30	570.88	554.50	532.90	507.98	481.43	450.57	418.62
255.0	590.50	582.67	572.15	556.06	536.01	512.91	486.12	458.60	426.42
270.0	590.50	585.85	575.31	557.80	541.19	516.63	490.10	461.07	430.52
285.0	590.50	585.58	572.01	556.74	538.34	514.41	489.85	461.45	453.77
300.0	590.50	584.33	573.34	557.08	551.81	513.04	486.87	457.83	424.33
315.0	590.50	583.67	573.44	557.29	535.92	510.52	484.41	452.18	418.08
330.0	590.50	585.27	574.36	558.76	538.39	510.98	480.96	447.51	408.66
345.0	590.50	585.01	574.93	557.40	535.45	508.46	478.24	444.96	404.49
360.0	590.50	591.75	588.89	576.92	561.20	538.16	512.89	481.81	447.60

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	409.11	367.41	324.99	278.37	229.96	180.22	132.53	81.80	40.19
15.0	418.54	377.13	334.27	290.88	241.82	196.80	152.51	109.74	72.92
30.0	424.34	386.52	350.05	309.09	267.87	225.66	189.01	151.46	120.54
45.0	441.05	406.23	369.52	332.81	297.72	262.00	226.19	193.26	163.30
60.0	451.65	421.95	387.66	355.63	320.62	286.79	254.48	224.25	193.92
75.0	459.14	429.39	398.01	365.73	335.08	301.63	272.14	242.02	213.88
90.0	459.82	427.84	399.62	367.20	335.67	304.31	274.30	244.56	218.12
105.0	452.70	421.26	390.09	357.05	325.25	295.96	264.44	236.13	208.98
120.0	440.33	407.90	375.29	342.86	307.75	274.61	242.45	211.72	185.72
135.0	426.33	390.52	352.56	315.67	281.47	243.50	210.56	178.79	149.35
150.0	408.84	368.09	329.24	289.93	248.82	207.53	169.85	136.40	104.31
165.0	393.33	354.21	309.77	265.34	219.47	173.33	130.96	89.95	56.22
180.0	348.21	301.95	254.88	205.67	156.02	108.33	59.66	23.58	2.95
195.0	348.95	304.84	257.66	213.19	167.45	122.98	84.72	53.48	31.33
210.0	354.53	313.31	272.71	232.74	193.31	158.80	122.87	96.61	73.49
225.0	371.14	331.46	296.28	258.22	225.83	192.99	162.76	136.40	112.65
240.0	385.05	350.86	317.11	283.73	251.06	219.84	193.65	165.49	143.80
255.0	395.04	364.65	330.94	300.46	269.62	241.12	212.09	205.97	162.73
270.0	400.06	368.53	335.67	328.34	275.02	245.09	217.58	192.22	169.35
285.0	399.29	366.51	334.54	302.21	270.42	242.02	213.89	186.74	162.81
300.0	391.91	356.53	324.10	290.25	257.46	225.57	196.62	170.36	144.36
315.0	381.73	343.76	306.60	269.08	235.16	199.08	168.92	140.65	115.16
330.0	368.90	329.69	285.15	246.02	205.01	166.60	131.71	100.79	76.99
345.0	362.39	318.59	273.80	227.47	180.52	136.90	94.62	59.54	34.00
360.0	409.11	367.41	324.99	278.37	229.96	180.22	132.53	81.80	40.19

Intensity data(cd)

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	8.93	0.89	0.71	0.45	0.36	0.27	0.45	0.71	0.80
15.0	44.74	27.19	15.75	9.81	6.84	5.13	4.41	4.14	3.96
30.0	93.02	70.98	52.96	39.25	29.04	21.78	16.40	12.64	10.04
45.0	136.04	112.47	92.67	72.97	58.66	45.89	35.99	27.35	21.23
60.0	169.09	144.16	122.02	101.42	83.15	68.03	54.17	42.83	32.94
75.0	187.54	163.45	139.08	118.58	99.26	81.45	66.08	53.22	41.81
90.0	191.95	166.49	143.36	122.28	103.08	84.32	69.31	55.74	43.59
105.0	182.45	157.00	135.57	114.85	95.56	78.50	63.50	51.44	40.37
120.0	160.18	135.52	114.08	95.05	77.72	63.61	50.74	40.02	30.91
135.0	124.85	101.69	83.38	66.78	52.78	41.29	32.58	24.95	19.48
150.0	81.14	60.22	44.63	33.00	24.43	18.39	14.15	11.09	9.02
165.0	32.38	18.35	10.34	6.93	5.04	4.14	3.78	3.69	3.60
180.0	1.96	1.70	1.61	1.52	1.52	1.34	1.34	1.25	1.07
195.0	18.28	11.25	7.83	6.12	5.13	4.59	4.23	3.69	3.24
210.0	54.58	40.33	29.93	22.40	16.58	12.99	10.22	8.24	6.81
225.0	92.04	73.51	59.29	46.70	36.26	27.71	26.09	16.11	12.33
240.0	120.85	101.24	83.15	68.39	54.62	43.28	33.39	25.38	19.26
255.0	139.62	118.58	99.61	82.26	67.61	54.03	42.44	32.46	24.18
270.0	145.06	124.96	105.49	87.71	71.63	57.43	45.64	34.57	26.17
285.0	139.94	118.51	100.02	82.52	66.62	53.67	41.88	31.79	23.76
300.0	122.03	101.04	83.88	67.98	53.96	42.52	32.61	24.83	18.31
315.0	93.88	74.50	58.88	45.77	35.63	26.84	20.46	15.35	11.58
330.0	55.98	41.38	29.93	21.73	15.96	12.08	9.38	7.66	6.31
345.0	18.44	10.43	6.75	5.13	4.41	3.96	3.51	3.15	2.79
360.0	8.93	0.89	0.71	0.45	0.36	0.27	0.45	0.71	0.80

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	1.07	1.61	2.23	2.86	3.48	3.66	4.20	4.20	4.29
15.0	3.69	4.05	4.05	4.32	4.59	4.41	4.59	4.32	4.32
30.0	8.33	7.62	7.17	6.90	6.90	5.74	5.47	4.84	4.48
45.0	16.29	13.05	10.98	9.63	8.91	7.74	6.39	5.31	4.86
60.0	25.65	19.53	15.48	12.60	10.71	9.00	8.10	5.85	4.95
75.0	31.92	24.45	18.97	14.92	12.14	9.89	8.54	6.65	5.12
90.0	33.67	26.26	20.10	15.54	12.59	10.18	8.75	6.70	5.54
105.0	30.99	23.84	18.67	14.38	11.97	9.82	8.39	6.70	5.54
120.0	23.67	18.67	14.83	12.06	10.36	8.93	7.95	6.34	5.27
135.0	15.08	12.21	10.50	9.33	8.62	7.63	6.73	5.83	4.94
150.0	7.75	7.12	7.03	6.94	6.76	5.86	5.77	5.05	4.60
165.0	3.51	3.51	3.87	4.14	4.59	4.41	4.59	4.32	4.41
180.0	1.07	1.16	1.52	2.05	2.59	3.04	3.48	4.02	4.38
195.0	2.88	2.70	2.61	2.61	2.61	2.70	3.51	4.05	4.32
210.0	5.74	5.56	4.75	4.66	4.39	3.94	3.50	3.94	4.39
225.0	9.63	7.92	6.93	6.30	5.76	5.04	4.32	3.96	4.41
240.0	14.40	10.98	8.91	7.74	6.75	5.94	5.04	3.96	4.32
255.0	17.89	13.49	10.52	8.63	7.46	6.38	5.39	4.14	4.32
270.0	19.38	14.20	10.99	8.84	7.59	6.52	5.45	4.11	4.29
285.0	17.59	13.40	10.27	8.48	7.32	6.34	5.27	4.02	4.29
300.0	13.85	10.63	8.58	7.33	6.52	5.72	4.73	3.84	4.29
315.0	9.15	7.54	6.55	6.01	5.48	4.76	3.95	3.86	4.22
330.0	5.41	4.78	4.51	4.42	3.97	3.52	3.34	3.97	4.42
345.0	2.43	2.25	2.07	2.07	2.61	2.88	3.42	3.87	4.32
360.0	1.07	1.61	2.23	2.86	3.48	3.66	4.20	4.20	4.29

Intensity data(cd)

C/γ(°)	180.0
0.0	4.38
15.0	4.50
30.0	4.39
45.0	4.41
60.0	4.50
75.0	4.41
90.0	4.38
105.0	4.38
120.0	4.38
135.0	4.40
150.0	4.42
165.0	4.41
180.0	0.00
195.0	0.00
210.0	0.00
225.0	0.00
240.0	0.00
255.0	0.00
270.0	0.00
285.0	0.00
300.0	0.00
315.0	0.00
330.0	0.00
345.0	0.00
360.0	4.38