AFX

Client:
LumCAT: ELZP42LAJD4LB
Luminaire: LED Lamp
Report No:
Ballast type:

Test No:	Voltage(V): 119.990
LampCAT:	Current(A): 0.204
Lamp flux(lm): 2109.3	Power (W): 24.190
Number of Lamps: 1	PF: 0.986
Length(mm): 1040	Width(mm): 15
Phm Type: C	Height(mm): 10

Photometric Results

Lumens(lm): 2109.27, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 87.20
Central intensity(cd): 573.524, Maximum intensity(cd): 574.864
Angle of maximum intensity: C=90.0 γ=5.0
Beam Angle(50%Imax): [C0/180]Total=109.2
[C90/270]Total=133.2
Field angle(10%Imax): [C0/180]Total=159.0
[C90/270]Total=238.0
Maximum s/h(1/2): C0_180=1.24 C90_270=1.30
Maximum s/h(1/4): C0_180=1.36 C90_270=1.44
Up flux rate of lamp(%): 10.27%
Down flux rate of lamp(%): 89.73%
Up flux rate of LUM(%): 10.27%
Down flux rate of LUM(%): 89.73%
CIE Type : Semidirect lighting
Output flux ratio in π solid angle : 62.737%

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Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	573.524	0.000	0	0.00%	0.00%
5.0	571.166	13.684	13.684	0.65%	0.65%
10.0	563.426	40.588	54.272	1.92%	2.57%
15.0	550.975	66.106	120.378	3.13%	5.71%
20.0	533.442	89.371	209.749	4.24%	9.94%
25.0	512.014	109.649	319.398	5.20%	15.14%
30.0	486.812	126.402	445.8	5.99%	21.14%
35.0	458.283	139.172	584.972	6.60%	27.73%
40.0	426.134	147.558	732.531	7.00%	34.73%
45.0	393.259	151.717	884.248	7.19%	41.92%
50.0	357.361	151.674	1035.922	7.19%	49.11%
55.0	321.350	147.574	1183.496	7.00%	56.11%
60.0	283.430	139.793	1323.29	6.63%	62.74%
65.0	248.128	129.223	1452.512	6.13%	68.86%
70.0	213.724	116.944	1569.456	5.54%	74.41%
75.0	179.095	102.677	1672.133	4.87%	79.28%
80.0	147.199	87.307	1759.44	4.14%	83.41%
85.0	120.879	72.843	1832.284	3.45%	86.87%
90.0	99.351	60.301	1892.584	2.86%	89.73%
95.0	80.667	49.290	1941.875	2.34%	92.06%
100.0	65.951	39.840	1981.714	1.89%	93.95%
105.0	53.479	31.956	2013.67	1.52%	95.47%
110.0	43.139	25.254	2038.925	1.20%	96.67%
115.0	33.844	19.493	2058.418	0.92%	97.59%
120.0	26.456	14.659	2073.077	0.69%	98.28%
125.0	20.262	10.799	2083.875	0.51%	98.80%
130.0	15.300	7.733	2091.608	0.37%	99.16%
135.0	11.458	5.407	2097.015	0.26%	99.42%
140.0	8.772	3.746	2100.76	0.18%	99.60%
145.0	7.131	2.653	2103.414	0.13%	99.72%
150.0	6.012	1.935	2105.349	0.09%	99.81%
155.0	5.229	1.423	2106.772	0.07%	99.88%
160.0	4.557	1.026	2107.798	0.05%	99.93%
165.0	4.185	0.720	2108.518	0.03%	99.96%
170.0	3.625	0.463	2108.982	0.02%	99.99%
175.0	2.916	0.234	2109.216	0.01%	100.00%
180.0	1.421	0.052	2109.268	0.00%	100.00%

Zonal flux distribution table

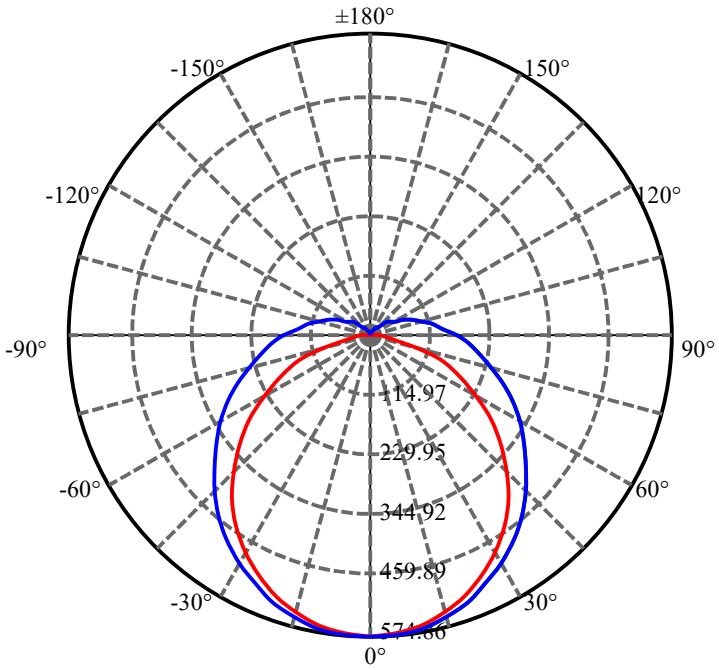
ZONAL LUMEN SUMMARY

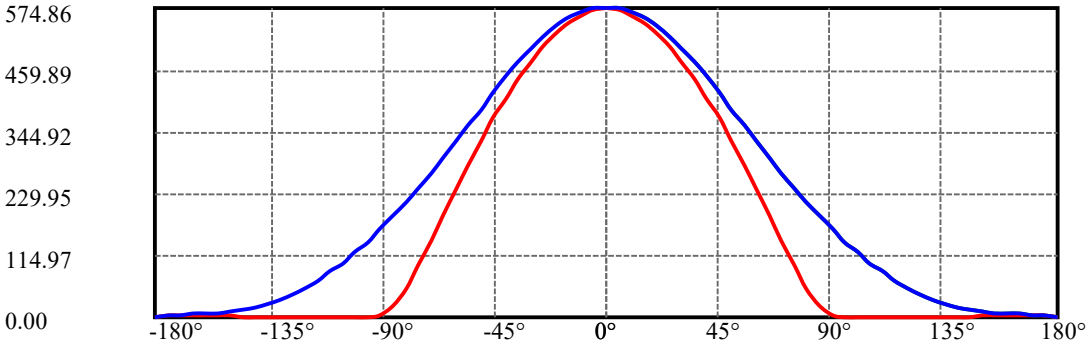
Zone	Lumens	%Lamp	%Fixt
0-30	445.80	21.14%	21.14%
0-40	732.53	34.73%	34.73%
0-60	1323.29	62.74%	62.74%
0-90	1892.58	89.73%	89.73%
0-120	2073.08	98.28%	98.28%
0-180	2109.27	100.00%	100.00%
60-90	569.29	26.99%	26.99%
90-120	180.49	8.56%	8.56%
90-130	199.02	9.44%	9.44%
90-150	212.76	10.09%	10.09%
90-180	216.63	10.27%	10.27%
0-75.88	1687.41	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	54.27
10-20	155.48
20-30	236.05
30-40	286.73
40-50	303.39
50-60	287.37
60-70	246.17
70-80	189.98
80-90	133.14
90-100	89.13
100-110	57.21
110-120	34.15
120-130	18.53
130-140	9.15
140-150	4.59
150-160	2.45
160-170	1.18
170-180	0.23

Light Distribution Curve [Unit:cd]





C90(Max):

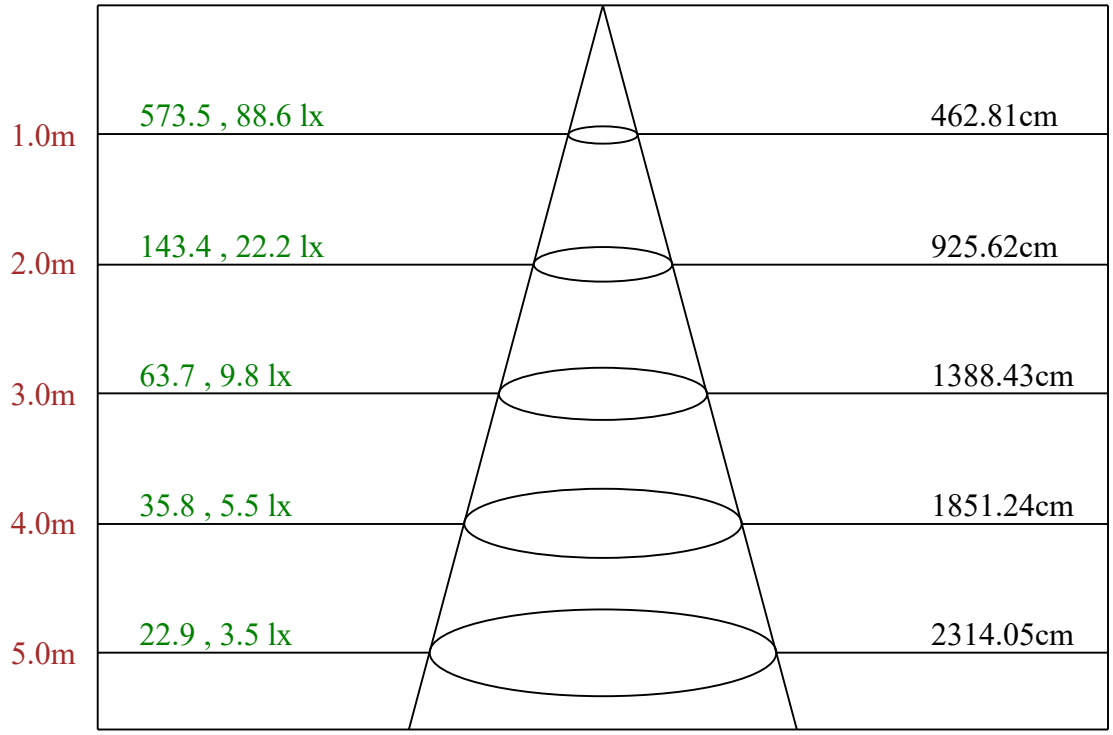
C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:79.5 Right:79.5
:C90/270Left:124.0 Right:114.0

Beam Angle(50%Imax):C0/180Left:54.6 Right:54.6
:C90/270Left:71.6 Right:61.6

Lux distance Curve



Max , Ave

Beam angle of C90 plane 133.26

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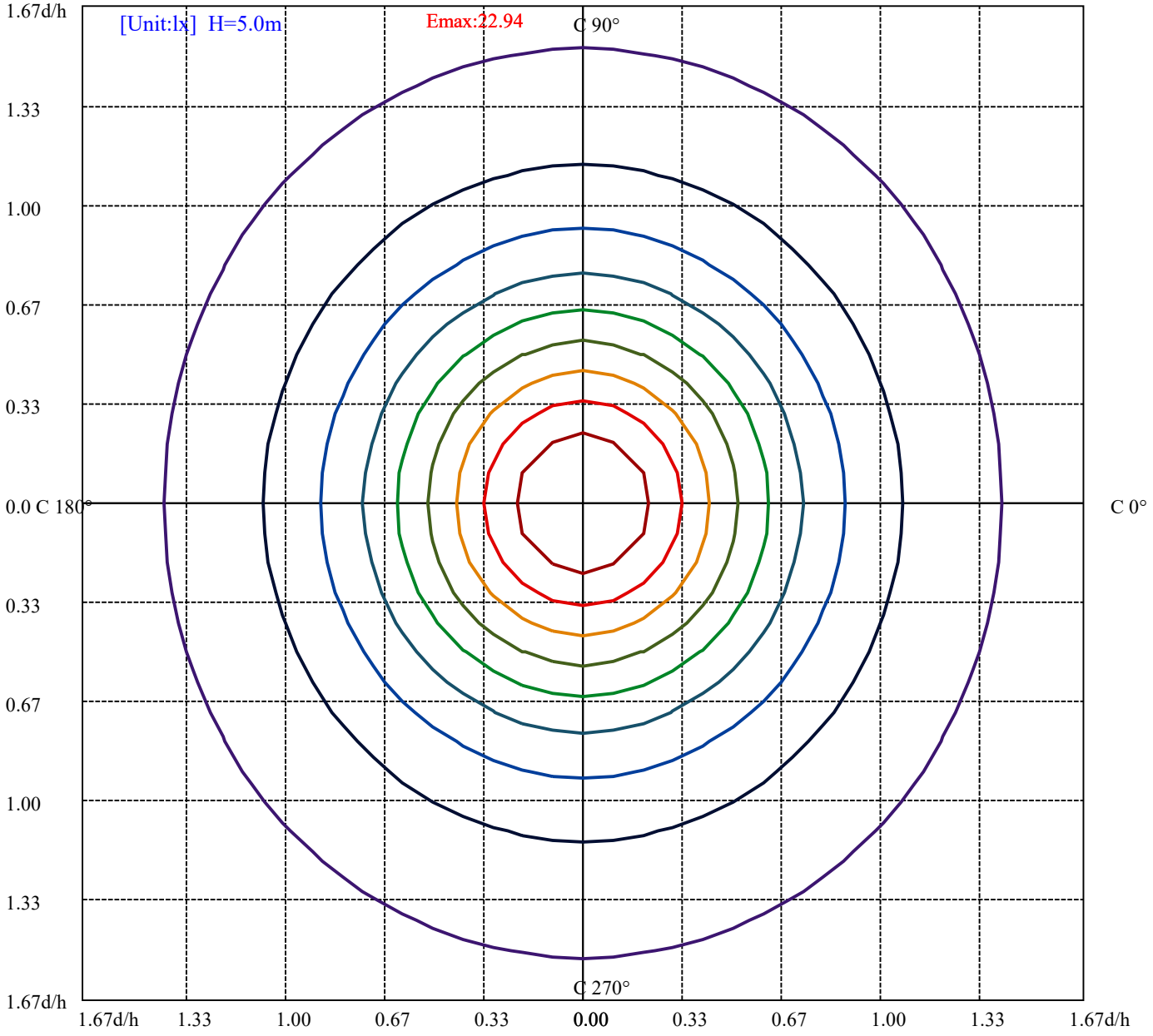
ISO illuminance diagram

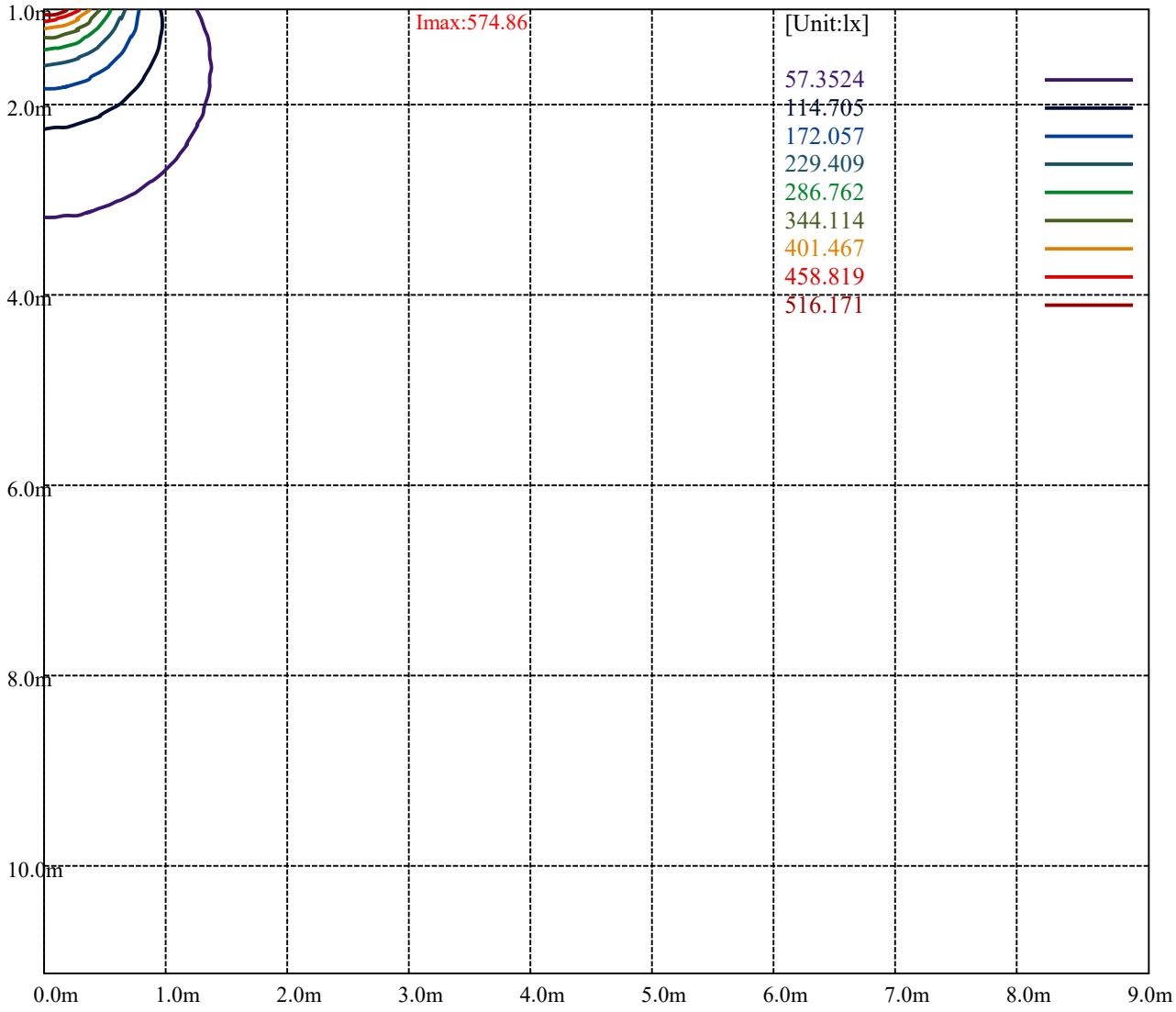


Equipment: LC-I-902 GMS-2000
Temperature(°C): 25.1

Date: 2025/8/8
Humidity(%): 59.8%

Operator: JUN WANG
Distance(m): 29.95

Space ISO Lux diagram



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Date: 2025/8/8
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Operator: JUN WANG
Distance(m): 29.95

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Luminance Limitting Curve(no luminous side)

Luminance Table

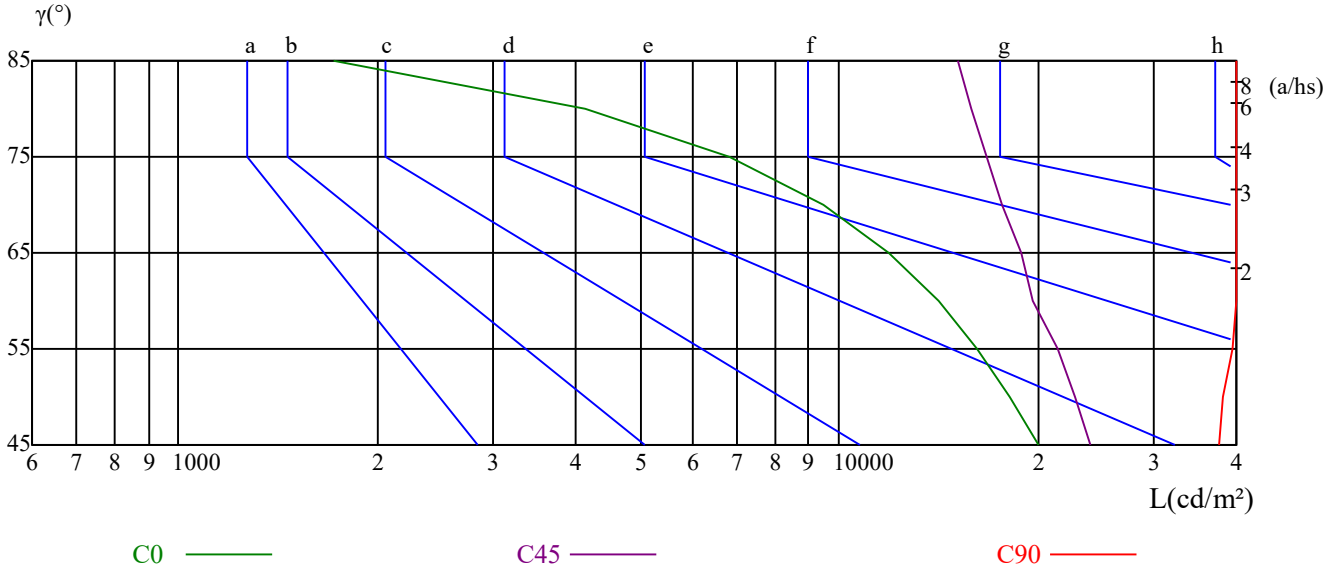
γ	45	50	55	60	65	70	75	80	85
C0	20131	18177	16212	14210	11916	9490	6840	4117	1720
C45	24109	22734	21472	19653	18886	17721	16763	15843	15161
C90	37580	38183	39493	41457	44144	48855	57243	74585	124613

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
28952	45054	38254	23859	59297	46681	14830	138308	98027

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



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	0.93	0.93	0.93	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	0.77	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	0.41	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	573.52	572.63	566.35	554.71	537.68	514.38	489.29	457.92	422.97
15.0	573.52	572.62	566.32	553.72	536.61	512.30	486.19	455.58	422.26
30.0	573.52	571.73	563.64	551.95	535.77	510.60	483.63	456.66	423.40
45.0	573.52	571.73	565.43	551.95	534.87	514.19	488.12	458.46	426.10
60.0	573.52	570.83	560.96	551.09	533.13	514.29	489.16	462.23	432.61
75.0	573.52	570.83	562.75	551.98	535.83	516.08	493.64	466.72	438.00
90.0	573.52	572.63	564.59	553.87	538.68	519.92	498.48	471.68	443.10
105.0	573.52	569.95	562.80	550.30	520.82	514.56	491.34	466.32	436.84
120.0	573.52	569.96	561.04	548.55	533.39	510.20	487.90	459.35	405.84
135.0	573.52	569.94	562.77	549.33	530.51	510.79	483.91	455.23	422.08
150.0	573.52	571.73	562.75	550.19	531.34	507.11	479.28	446.97	414.66
165.0	573.52	569.00	561.76	547.29	529.20	505.68	479.44	446.88	412.50
180.0	573.52	568.15	557.39	540.37	518.86	492.87	462.40	431.04	393.40
195.0	573.52	569.92	560.02	544.71	524.00	498.79	469.08	437.57	402.46
210.0	573.52	569.03	560.04	547.45	526.78	504.31	477.34	445.87	414.41
225.0	573.52	572.62	564.53	551.05	534.87	512.40	485.43	456.66	424.30
240.0	573.52	570.83	564.55	551.98	534.93	517.88	492.75	466.72	438.89
255.0	573.52	572.63	565.45	554.68	551.98	519.67	499.93	474.80	448.77
270.0	573.52	577.10	571.74	560.12	544.04	525.28	504.74	479.72	454.71
285.0	573.52	571.74	566.38	556.55	541.36	524.39	502.06	477.04	451.14
300.0	573.52	571.74	565.50	554.79	538.74	520.01	496.82	471.84	441.52
315.0	573.52	570.84	563.67	552.02	535.89	514.38	490.18	462.40	431.94
330.0	573.52	571.73	562.75	549.29	528.65	506.21	479.28	449.66	417.35
345.0	573.52	568.10	559.05	545.48	524.67	502.06	473.11	441.45	407.98
360.0	573.52	572.63	566.35	554.71	537.68	514.38	489.29	457.92	422.97

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	387.13	344.11	301.10	257.19	211.49	161.30	112.91	68.11	30.47
15.0	383.55	343.03	298.92	253.90	209.78	163.86	121.55	81.03	49.52
30.0	386.54	346.09	304.74	261.59	222.94	184.28	148.33	115.06	89.00
45.0	391.94	355.98	320.02	283.17	246.31	213.05	179.79	151.92	125.85
60.0	400.30	367.09	332.98	299.78	270.16	238.74	209.13	183.10	155.27
75.0	409.28	376.07	347.35	316.83	286.31	257.59	227.97	201.05	175.02
90.0	412.72	381.46	351.98	323.39	291.23	261.75	233.16	206.36	182.24
105.0	409.15	377.88	346.62	316.24	285.87	258.18	228.69	201.00	175.09
120.0	397.81	368.38	333.59	302.37	269.37	238.15	209.61	181.96	156.09
135.0	387.13	352.18	317.23	254.50	245.54	211.49	182.81	154.13	128.15
150.0	375.17	337.47	297.08	257.59	218.10	182.20	148.99	97.83	90.65
165.0	371.80	331.09	292.19	246.05	202.63	157.40	118.50	80.51	52.47
180.0	353.08	310.06	265.25	220.45	170.26	125.46	79.76	38.53	9.86
195.0	364.64	319.62	279.11	235.89	190.87	146.76	106.24	71.13	43.22
210.0	377.55	339.80	299.35	258.89	221.14	185.18	149.22	119.56	92.59
225.0	393.74	357.78	323.62	287.66	254.40	222.04	191.47	160.91	135.74
240.0	407.48	376.07	343.76	312.34	281.83	273.75	220.79	192.97	167.84
255.0	420.05	390.43	359.91	327.60	297.98	269.26	240.54	214.51	187.58
270.0	424.34	393.07	364.48	334.11	302.84	273.36	245.67	219.76	193.85
285.0	421.66	391.28	360.02	330.54	299.27	269.79	242.09	215.29	189.39
300.0	413.86	379.97	349.64	318.43	286.32	255.99	225.66	197.12	172.15
315.0	399.67	365.62	332.46	295.72	262.57	228.51	199.84	170.26	143.38
330.0	378.76	343.76	306.06	267.46	229.77	192.97	159.76	128.35	102.32
345.0	370.89	328.37	284.95	240.63	198.11	158.31	115.79	82.32	53.37
360.0	387.13	344.11	301.10	257.19	211.49	161.30	112.91	68.11	30.47

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	5.38	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
15.0	27.91	15.31	8.10	4.50	3.60	2.70	2.70	1.80	1.80
30.0	65.62	47.64	34.16	24.27	17.08	11.69	8.09	6.29	5.39
45.0	102.48	81.80	64.72	51.24	38.65	29.67	21.57	15.28	11.69
60.0	131.94	110.40	91.55	74.50	60.13	47.57	36.80	26.93	19.75
75.0	150.79	129.24	109.50	90.65	74.50	59.24	45.77	35.90	26.03
90.0	156.33	134.89	113.45	95.59	78.61	64.32	50.92	39.31	28.59
105.0	150.97	128.64	109.88	91.12	75.04	59.85	47.35	36.63	26.80
120.0	132.90	112.39	93.65	75.82	61.54	49.06	38.35	27.65	19.62
135.0	104.85	85.13	68.11	53.77	41.22	31.36	22.40	16.13	12.55
150.0	69.11	52.06	37.70	27.82	19.75	12.57	9.87	7.18	5.39
165.0	30.76	18.09	9.95	5.43	3.62	2.71	2.71	2.71	2.71
180.0	2.69	1.79	1.79	1.79	1.79	0.90	0.90	0.90	0.90
195.0	26.11	15.31	9.90	7.20	5.40	4.50	4.50	3.60	3.60
210.0	70.12	52.14	38.65	28.77	26.07	15.28	11.69	9.89	8.09
225.0	130.35	91.69	74.61	58.43	45.85	35.06	26.97	20.68	15.28
240.0	143.61	122.06	102.32	85.27	69.11	54.75	42.18	32.31	24.23
255.0	164.25	141.81	120.27	101.42	83.47	69.11	54.75	42.18	31.41
270.0	170.63	146.51	126.85	107.20	89.33	73.25	58.07	45.56	34.84
285.0	166.16	142.93	121.49	102.73	85.76	68.79	55.39	42.88	32.16
300.0	149.85	126.66	106.14	88.30	71.36	57.08	44.60	33.89	25.87
315.0	120.08	97.68	79.76	63.63	50.18	38.53	29.57	22.40	17.03
330.0	78.09	60.13	45.77	34.11	25.13	17.95	14.36	10.77	8.98
345.0	33.47	20.81	13.57	9.05	7.24	5.43	4.52	4.52	3.62
360.0	5.38	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.90	0.90	1.79	2.69	2.69	3.58	3.58	3.58	3.58
15.0	1.80	1.80	2.70	2.70	2.70	3.60	3.60	3.60	3.60
30.0	3.60	3.60	3.60	4.49	4.49	3.60	3.60	3.60	2.70
45.0	8.09	6.29	5.39	5.39	5.39	4.49	4.49	3.60	3.60
60.0	14.36	9.87	8.08	6.28	6.28	5.39	4.49	3.59	2.69
75.0	18.85	13.46	9.87	8.08	6.28	6.28	5.39	3.59	2.69
90.0	20.55	15.19	11.61	8.93	7.15	6.25	5.36	4.47	2.68
105.0	19.65	14.29	10.72	8.04	7.15	6.25	5.36	4.47	2.68
120.0	15.16	10.70	8.03	7.14	6.24	5.35	5.35	3.57	2.68
135.0	8.96	7.17	6.27	5.38	5.38	4.48	4.48	3.58	2.69
150.0	4.49	4.49	4.49	4.49	4.49	3.59	3.59	3.59	2.69
165.0	2.71	2.71	2.71	2.71	2.71	2.71	3.62	3.62	2.71
180.0	0.90	0.90	0.90	1.79	1.79	1.79	1.79	2.69	2.69
195.0	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
210.0	6.29	5.39	5.39	4.49	4.49	3.60	3.60	3.60	2.70
225.0	11.69	9.89	8.09	6.29	5.39	4.49	4.49	3.60	2.70
240.0	18.85	13.46	10.77	8.98	7.18	5.39	4.49	4.49	3.59
255.0	23.34	17.95	13.46	9.87	8.08	6.28	5.39	4.49	3.59
270.0	25.91	18.76	14.29	10.72	8.04	6.25	5.36	4.47	3.57
285.0	24.12	17.87	13.40	9.83	8.04	6.25	5.36	3.57	2.68
300.0	18.73	14.27	10.70	8.92	7.14	6.24	4.46	3.57	2.68
315.0	12.55	9.86	8.07	7.17	5.38	4.48	3.58	3.58	2.69
330.0	7.18	6.28	5.39	4.49	3.59	3.59	3.59	2.69	2.69
345.0	3.62	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71
360.0	0.90	0.90	1.79	2.69	2.69	3.58	3.58	3.58	3.58

Intensity data(cd)

C/γ(°)	180.0
0.0	2.69
15.0	3.60
30.0	2.70
45.0	3.60
60.0	2.69
75.0	2.69
90.0	2.68
105.0	2.68
120.0	2.68
135.0	2.69
150.0	2.69
165.0	2.71
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	2.69