
Light Blue USA-Rayhil

Client:

LumCAT: INV-9-CCT-120-**-2700K-F

Luminaire: LED lamp

Report No:

Ballast type:

Test No:

Voltage(V): 120.050

LampCAT:

Current(A): 0.128

Lamp flux(lm): 1118.2

Power (W): 14.530

Number of Lamps: 1

PF: 0.948

Length(mm): -210

Width(mm): -210

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1118.20, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 76.96

Central intensity(cd): 401.139, Maximum intensity(cd): 401.139

Angle of maximum intensity: C=0.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=110.4

[C90/270]Total=109.8

Field angle(10%Imax): [C0/180]Total=158.4

[C90/270]Total=158.4

Maximum s/h(1/2): C0_180=1.26 C90_270=1.27

Maximum s/h(1/4): C0_180=1.37 C90_270=1.37

Up flux rate of lamp(%): 0.80%

Down flux rate of lamp(%): 99.20%

Up flux rate of LUM(%): 0.80%

Down flux rate of LUM(%): 99.20%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 79.718%

Light Blue USA-Rayhil INV-9-CCT-120-**-2700K-F

Zonal flux distribution table

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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	401.139	0.000	0	0.00%	0.00%
5.0	399.498	9.571	9.571	0.86%	0.86%
10.0	393.965	28.385	37.956	2.54%	3.39%
15.0	385.191	46.219	84.175	4.13%	7.53%
20.0	372.829	62.472	146.647	5.59%	13.11%
25.0	357.339	76.581	223.228	6.85%	19.96%
30.0	338.530	88.063	311.291	7.88%	27.84%
35.0	316.783	96.499	407.79	8.63%	36.47%
40.0	291.488	101.485	509.275	9.08%	45.54%
45.0	263.178	102.701	611.976	9.18%	54.73%
50.0	231.929	100.044	712.02	8.95%	63.68%
55.0	201.141	94.164	806.184	8.42%	72.10%
60.0	167.529	85.217	891.401	7.62%	79.72%
65.0	134.221	73.356	964.757	6.56%	86.28%
70.0	99.845	59.267	1024.024	5.30%	91.58%
75.0	66.729	43.540	1067.564	3.89%	95.47%
80.0	35.864	27.451	1095.015	2.45%	97.93%
85.0	7.784	11.860	1106.875	1.06%	98.99%
90.0	0.916	2.382	1109.257	0.21%	99.20%
95.0	0.420	0.366	1109.623	0.03%	99.23%
100.0	0.420	0.228	1109.851	0.02%	99.25%
105.0	0.458	0.235	1110.086	0.02%	99.27%
110.0	0.572	0.269	1110.355	0.02%	99.30%
115.0	0.839	0.357	1110.712	0.03%	99.33%
120.0	1.107	0.473	1111.185	0.04%	99.37%
125.0	1.259	0.547	1111.732	0.05%	99.42%
130.0	1.602	0.622	1112.354	0.06%	99.48%
135.0	1.984	0.725	1113.079	0.06%	99.54%
140.0	2.061	0.749	1113.828	0.07%	99.61%
145.0	2.748	0.802	1114.63	0.07%	99.68%
150.0	3.129	0.865	1115.496	0.08%	99.76%
155.0	3.396	0.826	1116.322	0.07%	99.83%
160.0	3.472	0.720	1117.042	0.06%	99.90%
165.0	3.281	0.557	1117.598	0.05%	99.95%
170.0	2.937	0.369	1117.967	0.03%	99.98%
175.0	2.289	0.187	1118.154	0.02%	100.00%
180.0	1.336	0.043	1118.198	0.00%	100.00%

Equipment: LC-I-902 GMS-2000
Temperature($^{\circ}$ C): 24.8

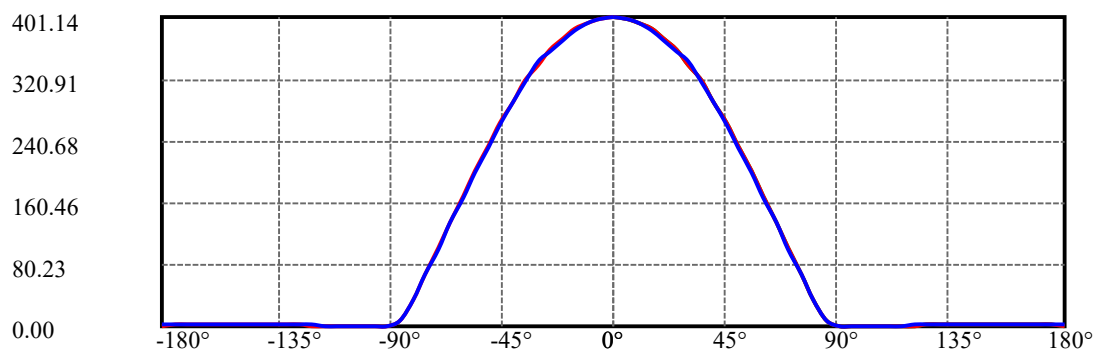
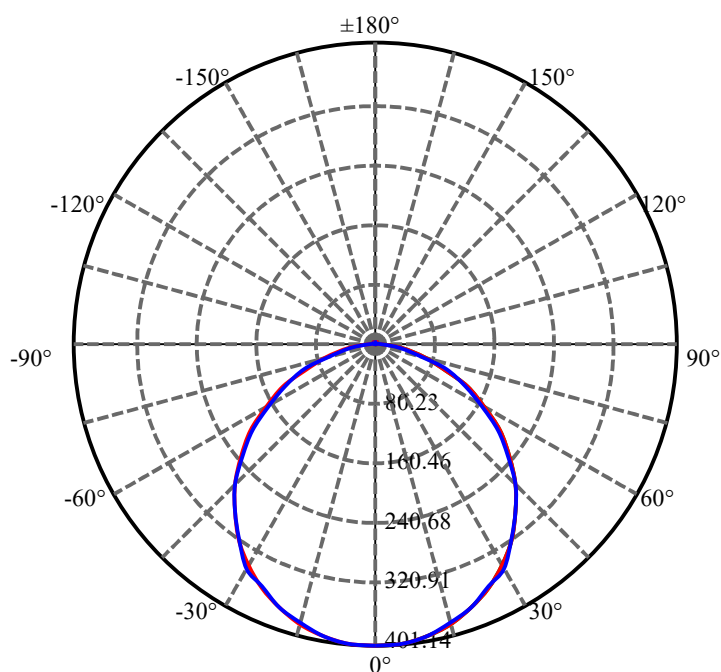
Date: 2024/12/18
Humidity(%): 60.2%

Operator: JUN WANG
Distance(m): 30.26

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	311.29	27.84%	27.84%
0-40	509.28	45.54%	45.54%
0-60	891.40	79.72%	79.72%
0-90	1109.26	99.20%	99.20%
0-120	1111.19	99.37%	99.37%
0-180	1118.20	100.00%	100.00%
60-90	217.86	19.48%	19.48%
90-120	1.93	0.17%	0.17%
90-130	3.10	0.28%	0.28%
90-150	6.24	0.56%	0.56%
90-180	8.90	0.80%	0.80%
0-60.22	894.56	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	37.96
10-20	108.69
20-30	164.64
30-40	197.98
40-50	202.74
50-60	179.38
60-70	132.62
70-80	70.99
80-90	14.24
90-100	0.59
100-110	0.50
110-120	0.83
120-130	1.17
130-140	1.47
140-150	1.67
150-160	1.55
160-170	0.93
170-180	0.19



C0(Max):

C0/C180:

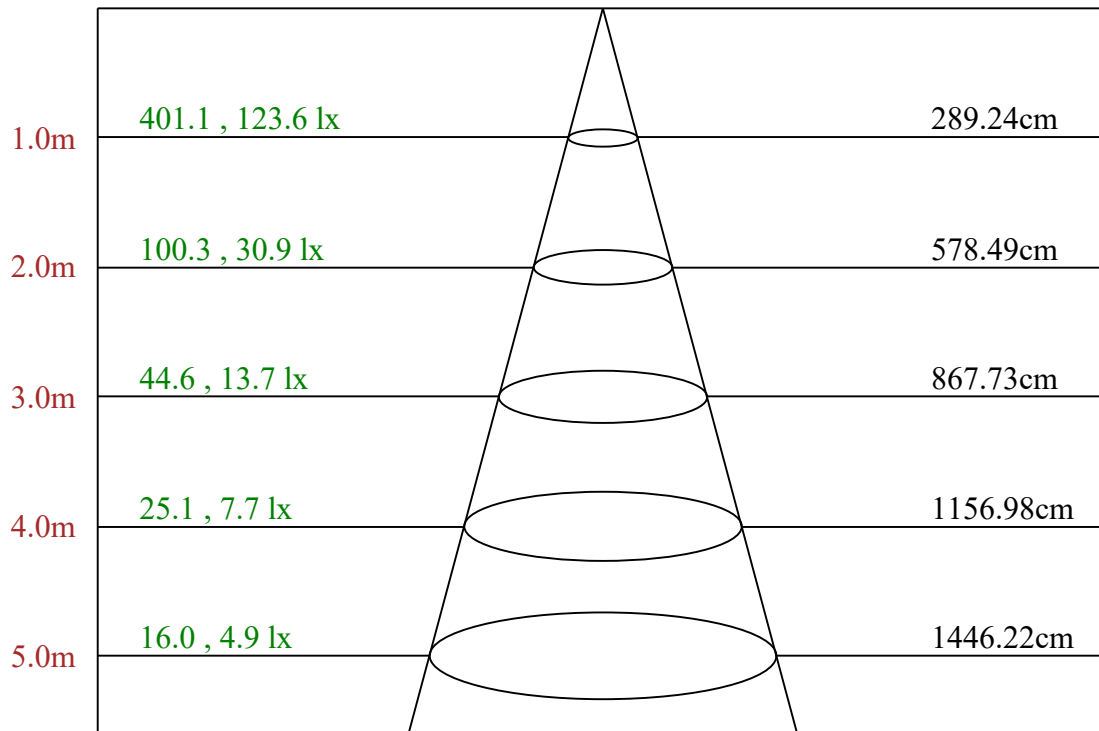
C90/C270:

Field angle(10%Imax):C0/180Left:79.2 Right:79.2

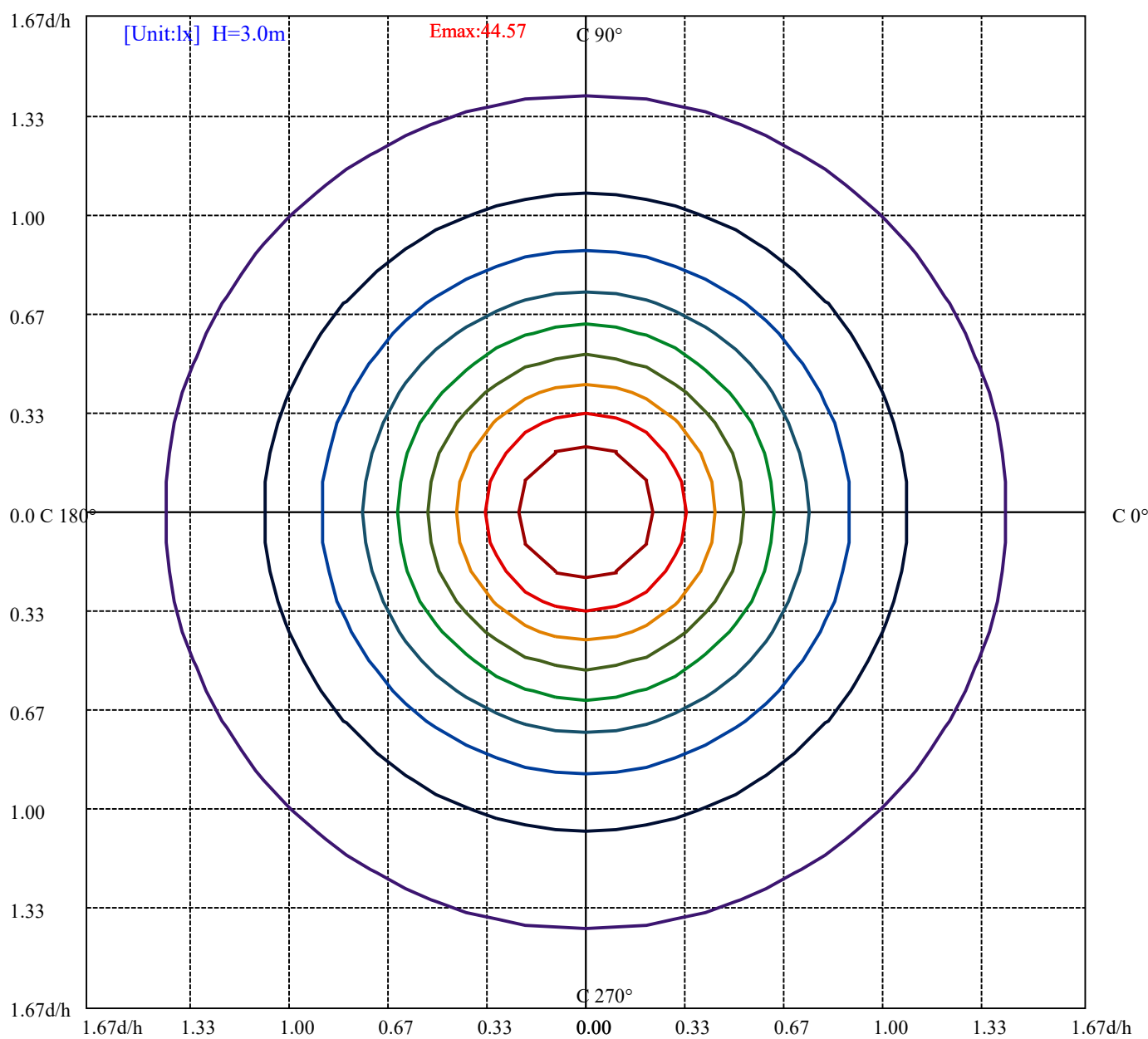
:C90/270Left:79.2 Right:79.2

Beam Angle(50%Imax):C0/180Left:55.2 Right:55.2

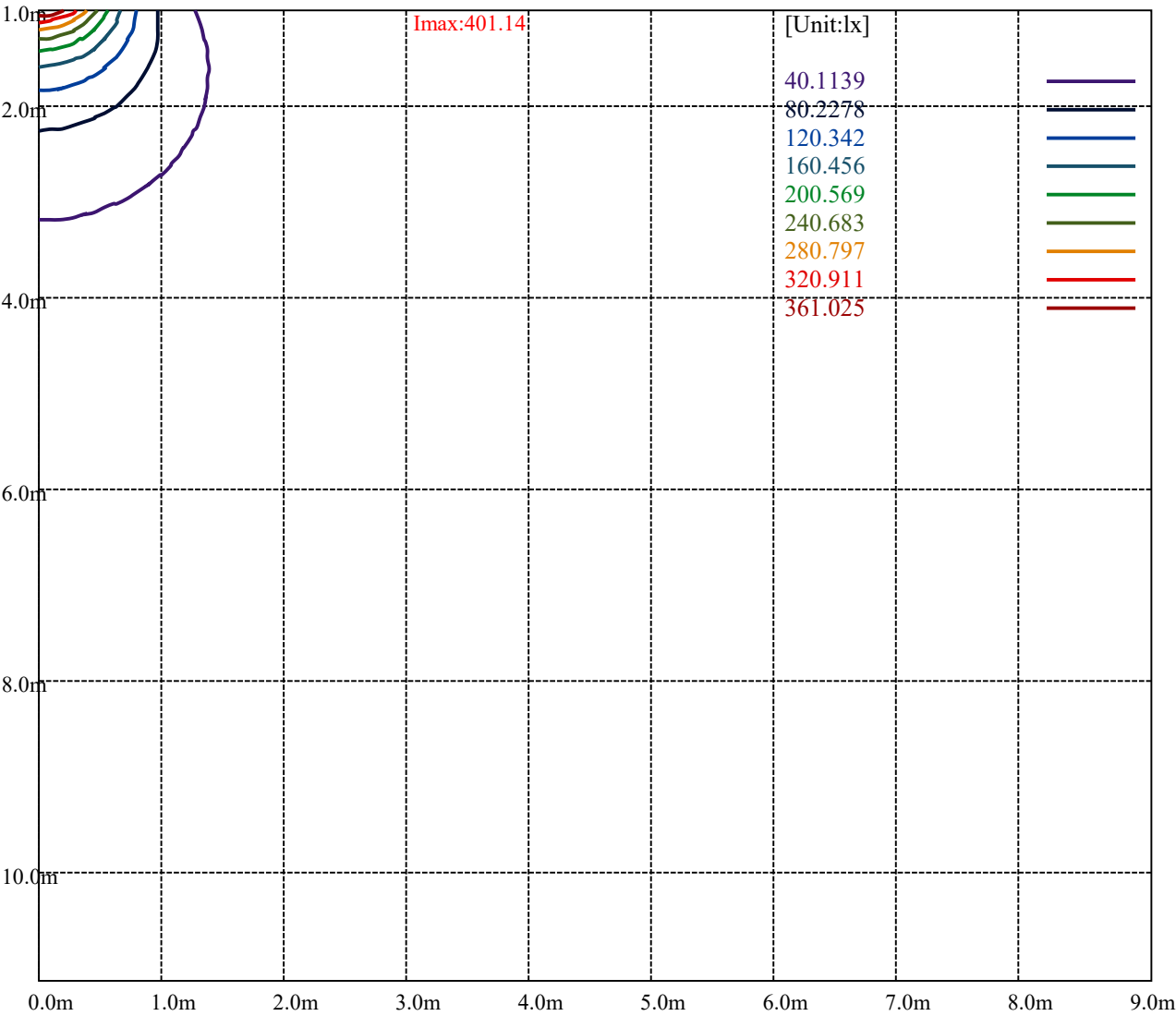
:C90/270Left:54.9 Right:54.9



Max , Ave Beam angle of C0 plane 110.68



(10%Emax) 4.4571	—
(20%Emax) 8.914188	—
(30%Emax) 13.37133	—
(40%Emax) 17.82833	—
(50%Emax) 22.28544	—
(60%Emax) 26.74256	—
(70%Emax) 31.19967	—
(80%Emax) 35.65678	—
(90%Emax) 40.11389	—



Luminance Table

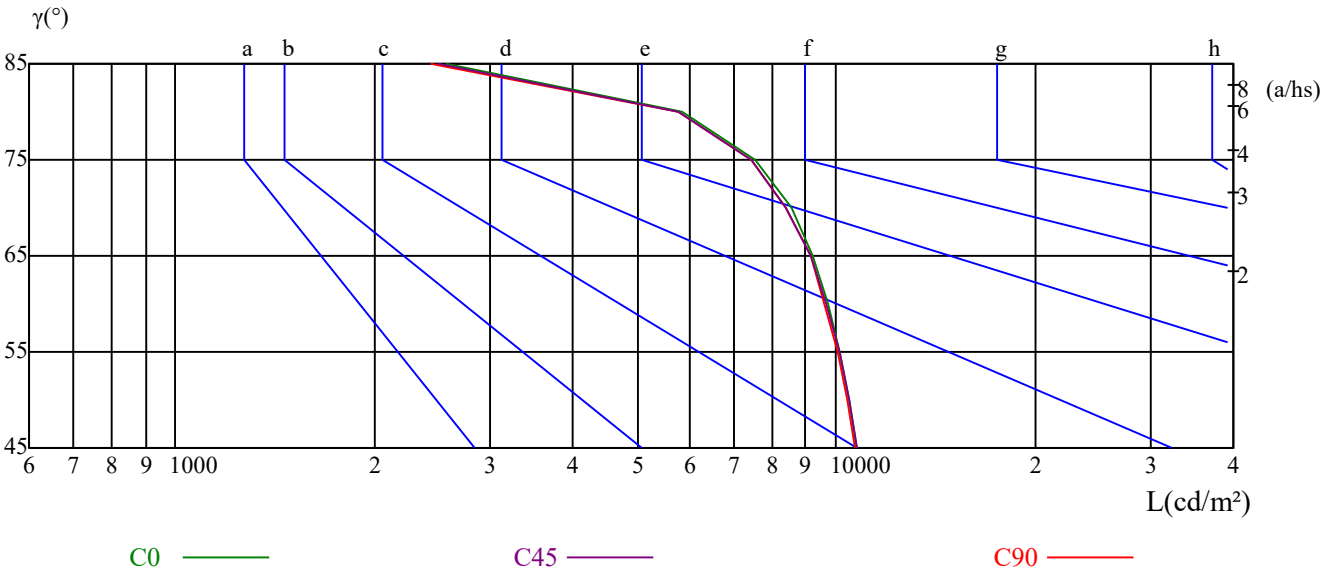
γ	45	50	55	60	65	70	75	80	85
C0	10776	10483	10165	9713	9249	8581	7526	5836	2567
C45	10760	10479	10107	9665	9135	8427	7432	5786	2503
C90	10714	10407	10073	9625	9135	8388	7458	5786	2427

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
9249	9135	9135	7526	7458	7432	2567	2427	2503

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



RHOC	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	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	0.99
1	1.04	1.00	0.96	1.02	0.98	0.95	0.98	0.94	0.92	0.93	0.91	0.89	0.90	0.88	0.86	0.84
2	0.91	0.84	0.79	0.89	0.83	0.78	0.85	0.80	0.76	0.82	0.78	0.74	0.79	0.75	0.72	0.70
3	0.80	0.72	0.66	0.78	0.71	0.65	0.75	0.69	0.64	0.72	0.67	0.62	0.70	0.65	0.61	0.59
4	0.71	0.62	0.56	0.70	0.61	0.55	0.67	0.60	0.54	0.65	0.58	0.53	0.62	0.57	0.53	0.50
5	0.63	0.54	0.48	0.62	0.54	0.48	0.60	0.53	0.47	0.58	0.51	0.46	0.56	0.50	0.46	0.44
6	0.57	0.48	0.42	0.56	0.48	0.42	0.54	0.47	0.41	0.52	0.46	0.41	0.51	0.45	0.40	0.38
7	0.52	0.43	0.37	0.51	0.43	0.37	0.49	0.42	0.36	0.48	0.41	0.36	0.46	0.40	0.36	0.34
8	0.47	0.39	0.33	0.46	0.38	0.33	0.45	0.38	0.33	0.44	0.37	0.32	0.43	0.37	0.32	0.30
9	0.43	0.35	0.30	0.43	0.35	0.30	0.41	0.34	0.29	0.40	0.34	0.29	0.39	0.33	0.29	0.27
10	0.40	0.32	0.27	0.39	0.32	0.27	0.38	0.31	0.27	0.37	0.31	0.26	0.36	0.31	0.26	0.25

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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	401.14	400.23	395.67	388.38	377.44	362.85	343.70	324.56	299.03
15.0	401.14	401.14	395.66	388.35	376.47	361.85	344.49	323.47	299.71
30.0	401.14	400.22	395.66	386.52	375.55	360.93	343.57	322.56	296.97
45.0	401.14	400.22	395.64	387.40	375.50	360.84	342.52	321.46	296.73
60.0	401.14	400.22	395.64	387.40	374.58	360.84	341.61	320.54	296.73
75.0	401.14	400.22	394.73	386.49	375.50	359.93	341.61	321.46	296.73
90.0	401.14	399.31	394.73	387.40	374.58	359.01	341.61	321.46	296.73
105.0	401.14	400.22	395.64	387.40	375.50	359.93	342.52	320.54	295.82
120.0	401.14	401.14	390.12	388.29	376.35	362.59	343.31	324.03	299.25
135.0	401.14	400.22	395.64	387.40	376.41	361.76	328.79	323.29	298.56
150.0	401.14	400.22	396.55	388.29	377.27	363.50	346.06	324.95	301.08
165.0	401.14	400.22	396.55	389.21	377.27	363.50	346.06	324.95	302.00
180.0	401.14	398.40	392.02	381.99	370.14	353.73	333.67	310.88	284.44
195.0	401.14	399.31	392.91	382.86	370.07	353.62	334.43	312.50	285.09
210.0	401.14	398.40	392.91	382.86	370.07	353.62	335.35	311.59	285.09
225.0	401.14	399.31	392.90	383.74	370.00	353.51	335.20	311.39	286.66
240.0	401.14	398.39	392.90	383.74	370.92	354.43	334.28	311.39	284.83
255.0	401.14	398.39	392.90	382.82	370.00	352.60	333.37	312.30	285.74
270.0	401.14	398.39	391.98	381.91	370.00	353.51	348.02	309.55	284.83
285.0	401.14	398.39	396.56	382.82	369.08	352.60	333.37	309.55	284.83
300.0	401.14	399.30	391.96	383.70	369.01	353.41	333.21	311.18	285.48
315.0	401.14	398.39	391.98	381.91	368.17	352.60	333.37	310.47	283.00
330.0	401.14	399.30	391.96	381.86	369.01	352.49	333.21	310.26	283.64
345.0	401.14	398.38	391.96	381.86	369.01	352.49	331.38	308.43	282.72
360.0	401.14	400.23	395.67	388.38	377.44	362.85	343.70	324.56	299.03
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	271.68	241.59	209.69	177.78	144.05	110.31	75.67	42.85	11.85
15.0	269.56	241.23	209.25	175.44	141.63	107.82	74.01	42.95	11.88
30.0	269.56	239.40	209.25	174.53	142.55	106.00	74.01	41.12	11.88
45.0	270.17	239.03	208.81	174.93	141.04	107.15	74.18	40.30	10.99
60.0	268.34	239.03	206.98	173.09	141.04	107.15	73.27	40.30	10.99
75.0	266.51	239.03	206.98	174.01	140.12	106.24	72.35	41.21	10.99
90.0	268.34	238.12	206.98	174.01	141.96	107.15	74.18	41.21	10.99
105.0	270.17	239.95	209.73	174.93	141.96	107.15	73.27	42.13	10.99
120.0	270.79	240.50	209.29	178.08	144.12	108.32	74.35	43.14	11.93
135.0	271.09	242.70	208.81	176.76	142.87	108.99	76.01	43.04	11.91
150.0	272.63	218.47	211.13	178.08	144.12	110.15	78.02	44.98	13.77
165.0	274.46	245.09	212.04	179.92	145.95	106.48	78.02	44.98	14.69
180.0	256.18	225.18	194.19	158.63	126.72	92.99	59.26	27.35	3.65
195.0	256.77	225.70	192.80	159.91	126.10	92.29	59.39	28.33	3.66
210.0	255.85	225.70	194.63	158.99	127.01	93.20	60.31	28.33	3.66
225.0	257.35	227.13	194.16	160.27	126.39	92.50	58.61	28.39	3.66
240.0	256.44	226.21	195.07	161.19	127.30	93.42	59.53	27.48	3.66
255.0	256.44	225.30	193.24	158.44	125.47	91.58	58.61	51.29	3.66
270.0	256.44	225.30	193.24	159.36	125.47	91.58	59.53	28.39	3.66
285.0	255.52	225.30	193.24	160.27	126.39	92.50	58.61	26.56	3.66
300.0	256.10	224.89	191.85	158.80	124.84	92.71	58.75	27.54	3.67
315.0	255.52	224.38	191.41	157.52	124.55	90.67	57.70	27.48	3.66
330.0	255.19	223.98	192.77	157.89	125.76	89.96	57.83	25.70	3.67
345.0	255.19	223.06	191.85	157.89	123.92	89.96	55.99	25.70	3.67
360.0	271.68	241.59	209.69	177.78	144.05	110.31	75.67	42.85	11.85

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Intensity data(cd)									Appendix Page: 11 Total:12	
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0	
0.0	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91	1.82	
15.0	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91	1.83	
30.0	0.91	0.00	0.00	0.00	0.91	0.91	0.91	0.91	1.83	
45.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	1.83	
60.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	1.83	
75.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	1.83	
90.0	0.92	0.00	0.00	0.92	0.92	0.92	0.92	1.83	1.83	
105.0	0.92	0.00	0.00	0.00	0.92	0.92	0.92	1.83	1.83	
120.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	1.84	
135.0	0.92	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92	
150.0	0.92	0.00	0.00	0.00	0.00	0.92	0.92	0.92	0.92	
165.0	0.92	0.00	0.00	0.00	0.00	0.00	0.92	0.92	0.92	
180.0	0.91	0.91	0.91	0.91	0.91	0.91	0.91	1.82	1.82	
195.0	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
210.0	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
225.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
240.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
255.0	0.92	0.00	0.00	0.00	0.92	0.92	0.92	0.92	1.83	
270.0	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83	1.83	
285.0	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83	1.83	
300.0	0.92	0.92	0.92	0.92	0.92	0.92	1.84	1.84	2.75	
315.0	0.92	0.92	0.92	0.92	0.92	0.92	1.83	1.83	1.83	
330.0	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.84	1.84	
345.0	0.92	0.92	0.92	0.92	0.92	0.92	1.84	1.84	1.84	
360.0	0.91	0.00	0.00	0.00	0.00	0.91	0.91	0.91	1.82	
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0	
0.0	1.82	1.82	2.74	3.65	3.65	3.65	3.65	3.65	2.74	
15.0	1.83	1.83	2.74	3.66	3.66	3.66	3.66	3.66	2.74	
30.0	1.83	1.83	2.74	3.66	3.66	3.66	3.66	3.66	2.74	
45.0	1.83	1.83	2.75	2.75	3.66	3.66	2.75	3.66	2.75	
60.0	1.83	1.83	2.75	3.66	3.66	3.66	3.66	3.66	2.75	
75.0	1.83	1.83	2.75	3.66	3.66	3.66	3.66	2.75	2.75	
90.0	1.83	2.75	3.66	3.66	3.66	3.66	3.66	2.75	2.75	
105.0	2.75	2.75	3.66	4.58	4.58	4.58	4.58	2.75	2.75	
120.0	1.84	2.75	3.67	3.67	4.59	4.59	4.59	3.67	2.75	
135.0	1.83	2.75	3.66	3.66	4.58	4.58	3.66	3.66	2.75	
150.0	1.84	1.84	2.75	3.67	3.67	3.67	3.67	3.67	2.75	
165.0	1.84	1.84	2.75	2.75	3.67	3.67	3.67	3.67	2.75	
180.0	1.82	1.82	1.82	1.82	2.74	2.74	3.65	3.65	1.82	
195.0	1.83	0.91	1.83	1.83	2.74	2.74	3.66	2.74	1.83	
210.0	0.91	0.91	0.91	1.83	1.83	2.74	2.74	2.74	1.83	
225.0	0.92	0.92	0.92	1.83	2.75	2.75	2.75	2.75	1.83	
240.0	1.83	1.83	2.75	1.83	1.83	1.83	1.83	2.75	1.83	
255.0	1.83	1.83	2.75	2.75	2.75	2.75	1.83	1.83	1.83	
270.0	2.75	2.75	2.75	2.75	2.75	2.75	1.83	1.83	1.83	
285.0	2.75	2.75	3.66	3.66	3.66	3.66	1.83	1.83	1.83	
300.0	2.75	2.75	3.67	3.67	3.67	3.67	2.75	1.84	1.84	
315.0	2.75	2.75	2.75	3.66	3.66	3.66	3.66	1.83	1.83	
330.0	2.75	2.75	2.75	3.67	3.67	3.67	3.67	2.75	1.84	
345.0	1.84	1.84	2.75	2.75	2.75	3.67	3.67	2.75	1.84	
360.0	1.82	1.82	2.74	3.65	3.65	3.65	3.65	3.65	2.74	

Intensity data(cd)

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C/γ(°)	180.0
0.0	1.82
15.0	2.74
30.0	2.74
45.0	2.75
60.0	2.75
75.0	2.75
90.0	2.75
105.0	2.75
120.0	2.75
135.0	2.75
150.0	2.75
165.0	2.75
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	1.82