
Light Blue USA & Associates LLC

Client:

LumCAT: LED lamp

Luminaire: POL-3-CCT-BK-P3-R

Report No:

Ballast type:

Test No:

Voltage(V): 120.010

LampCAT:

Current(A): 0.511

Lamp flux(lm): 2106.0

Power (W): 60.470

Number of Lamps: 1

PF: 0.987

Length(mm): 900

Width(mm): 20

Phm Type: C

Height(mm): 120

Photometric Results

Lumens(lm): 2106.00, Efficiency(%): 100.00% , Luminous Efficacy(lm/W): 34.83

Central intensity(cd): 444.228, Maximum intensity(cd): 478.152

Angle of maximum intensity: C=75.0 γ =165.0

Beam Angle(50%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Field angle(10%Imax): [C0/180]Total=N.A.

[C90/270]Total=N.A.

Maximum s/h(1/2): C0_180=1.16 C90_270=1.36

Maximum s/h(1/4): C0_180=1.27 C90_270=1.42

Up flux rate of lamp(%): 50.70%

Down flux rate of lamp(%): 49.30%

Up flux rate of LUM(%): 50.70%

Down flux rate of LUM(%): 49.30%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 39.377%

Light Blue USA & Associates LLC LED lamp

Zonal flux distribution table

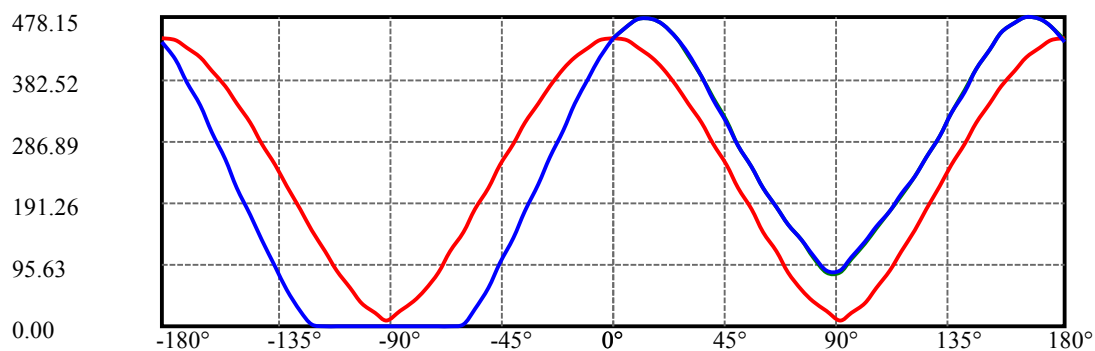
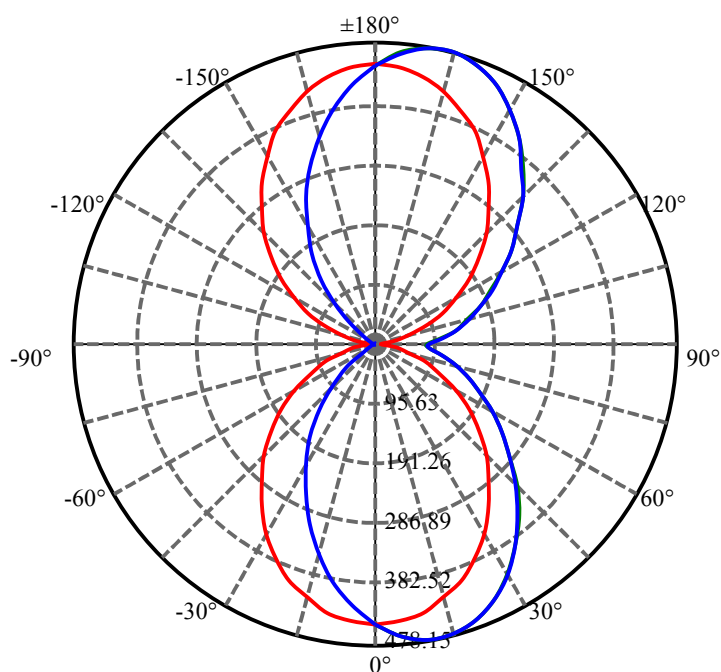
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$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	444.228	0.000	0	0.00%	0.00%
5.0	441.204	10.585	10.585	0.50%	0.50%
10.0	430.435	31.181	41.766	1.48%	1.98%
15.0	413.583	50.067	91.833	2.38%	4.36%
20.0	390.867	66.298	158.131	3.15%	7.51%
25.0	363.320	79.100	237.231	3.76%	11.26%
30.0	332.783	88.092	325.324	4.18%	15.45%
35.0	298.010	92.889	418.212	4.41%	19.86%
40.0	262.791	93.565	511.778	4.44%	24.30%
45.0	227.942	90.863	602.641	4.31%	28.62%
50.0	191.581	84.771	687.412	4.03%	32.64%
55.0	157.726	75.951	763.363	3.61%	36.25%
60.0	127.411	65.908	829.271	3.13%	39.38%
65.0	101.819	55.726	884.997	2.65%	42.02%
70.0	81.023	46.297	931.294	2.20%	44.22%
75.0	63.249	37.710	969.004	1.79%	46.01%
80.0	47.577	29.654	998.658	1.41%	47.42%
85.0	34.264	22.238	1020.896	1.06%	48.48%
90.0	29.096	17.349	1038.245	0.82%	49.30%
95.0	40.529	19.064	1057.309	0.91%	50.20%
100.0	53.841	25.643	1082.952	1.22%	51.42%
105.0	69.257	32.938	1115.889	1.56%	52.99%
110.0	86.920	40.822	1156.711	1.94%	54.92%
115.0	107.496	49.227	1205.939	2.34%	57.26%
120.0	132.537	58.352	1264.291	2.77%	60.03%
125.0	163.075	68.330	1332.621	3.24%	63.28%
130.0	196.524	78.189	1410.81	3.71%	66.99%
135.0	232.264	86.643	1497.453	4.11%	71.10%
140.0	266.666	92.381	1589.833	4.39%	75.49%
145.0	301.626	94.815	1684.649	4.50%	79.99%
150.0	336.262	93.933	1778.582	4.46%	84.45%
155.0	366.163	88.892	1867.474	4.22%	88.67%
160.0	393.083	79.631	1947.105	3.78%	92.46%
165.0	416.207	66.697	2013.802	3.17%	95.62%
170.0	431.879	50.308	2064.11	2.39%	98.01%
175.0	442.390	31.275	2095.385	1.49%	99.50%
180.0	445.708	10.617	2106.002	0.50%	100.00%

ZONAL LUMEN SUMMARY			
Zone	Lumens	%Lamp	%Fixt
0-30	325.32	15.45%	15.45%
0-40	511.78	24.30%	24.30%
0-60	829.27	39.38%	39.38%
0-90	1038.24	49.30%	49.30%
0-120	1264.29	60.03%	60.03%
0-180	2106.00	100.00%	100.00%
60-90	208.97	9.92%	9.92%
90-120	226.05	10.73%	10.73%
90-130	372.56	17.69%	17.69%
90-150	740.34	35.15%	35.15%
90-180	1057.14	50.20%	50.20%
0-145.01	1684.80	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	41.77
10-20	116.36
20-30	167.19
30-40	186.45
40-50	175.63
50-60	141.86
60-70	102.02
70-80	67.36
80-90	39.59
90-100	44.71
100-110	73.76
110-120	107.58
120-130	146.52
130-140	179.02
140-150	188.75
150-160	168.52
160-170	117.00
170-180	31.28



C75(Max): —————

C0/C180: —————

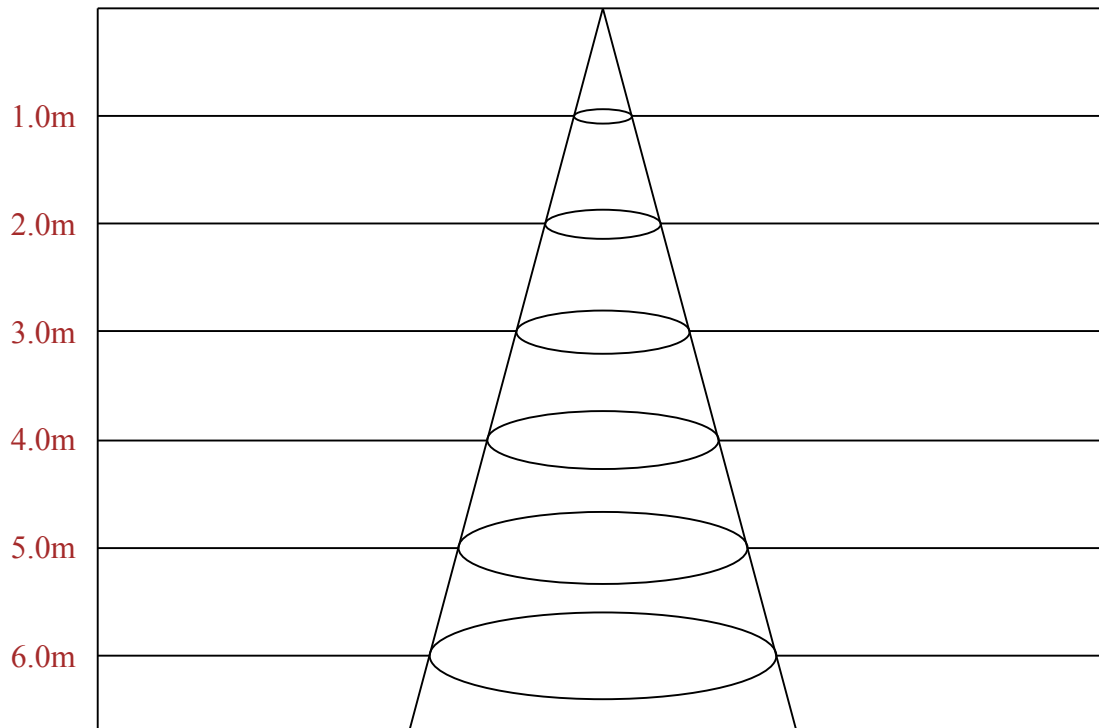
C90/C270: —————

Field angle(10%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

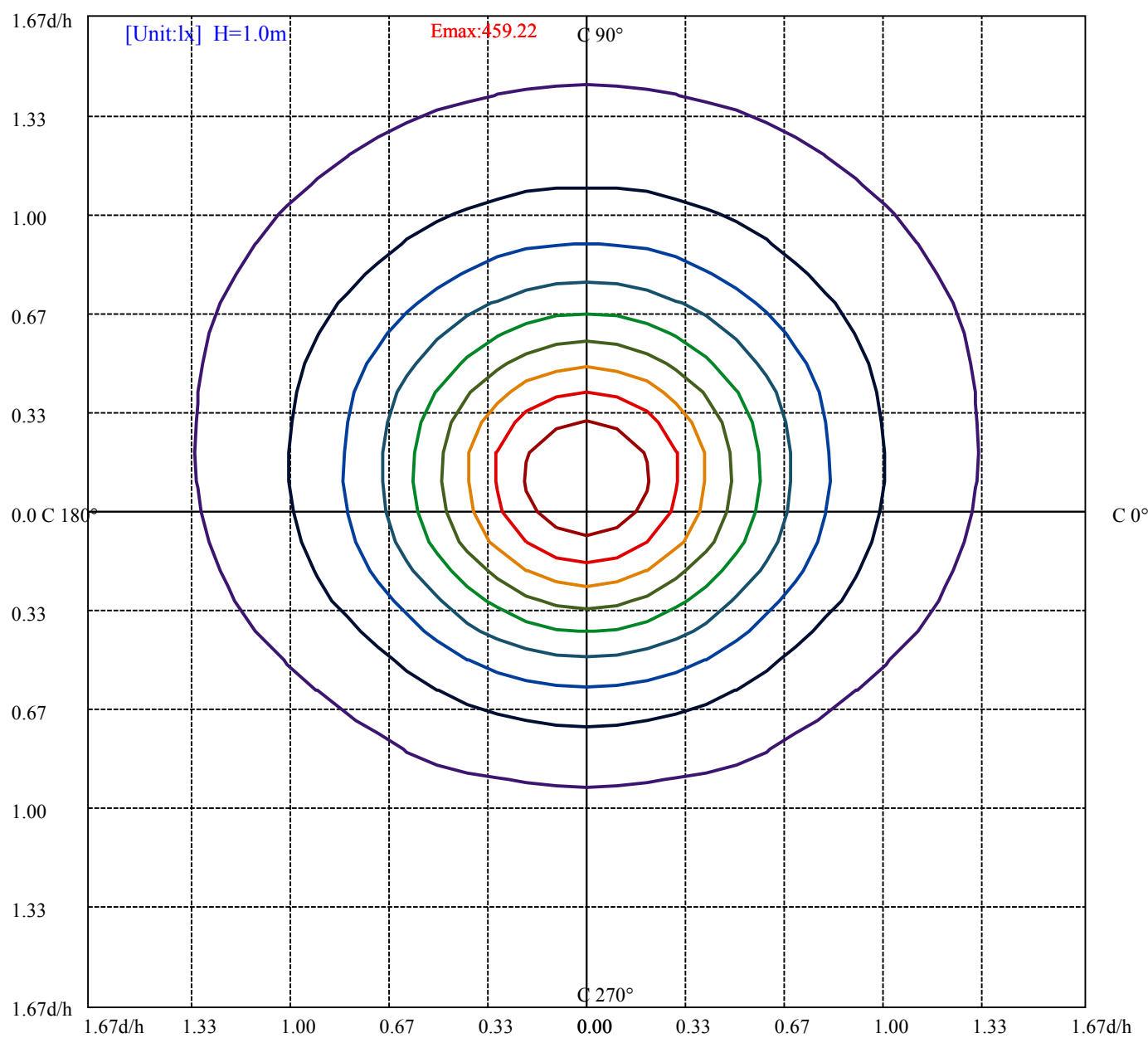
Beam Angle(50%Imax):C0/180Left:0.0 Right:0.0

:C90/270Left:0.0 Right:0.0

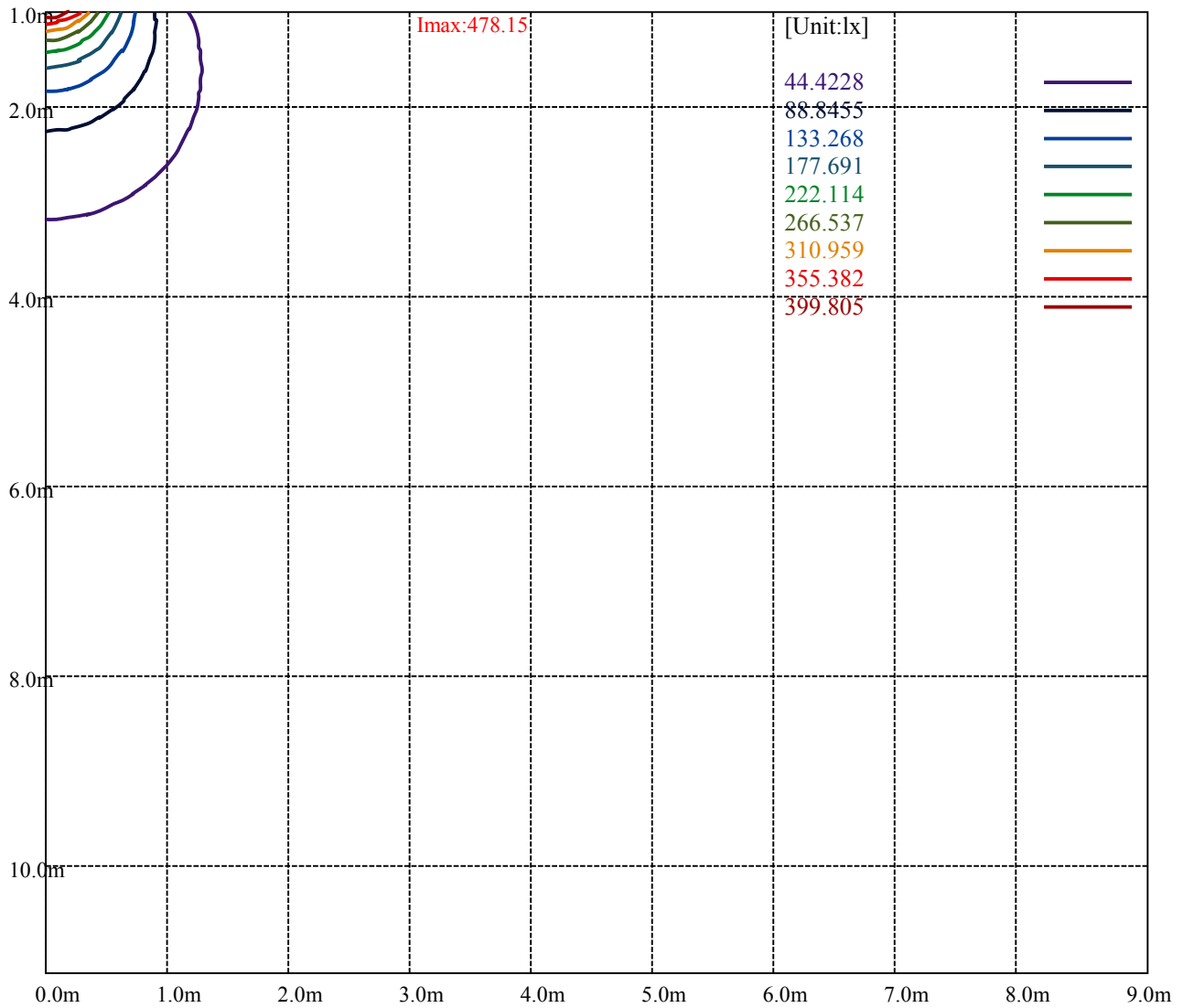


Max , Ave

Beam angle of C75 plane 622.46



(10%Emax) 45.9223	—
(20%Emax) 91.8445	—
(30%Emax) 137.767	—
(40%Emax) 183.689	—
(50%Emax) 229.611	—
(60%Emax) 275.534	—
(70%Emax) 321.456	—
(80%Emax) 367.378	—
(90%Emax) 413.3	—



Light Blue USA & Associates LLC LED lamp

Luminance Limiting Curve(no luminous side)

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Luminance Table

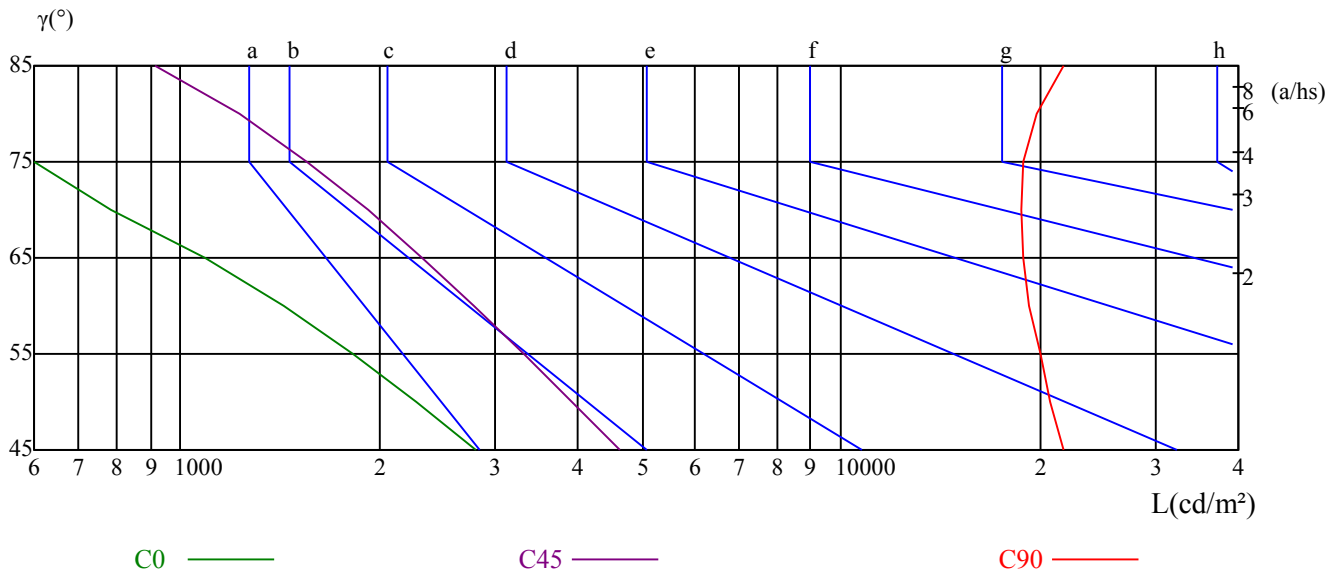
γ	45	50	55	60	65	70	75	80	85
C0	2792	2271	1826	1431	1089	783	529	348	215
C45	4613	3905	3311	2781	2328	1921	1558	1227	913
C90	21814	20772	20009	19333	18921	18756	18950	19750	21814

L(Hor)(65)	L(Ver)(65)	L45(65)	L(Hor)(75)	L(Ver)(75)	L45(75)	L(Hor)(85)	L(Ver)(85)	L45(85)
15094	12224	13240	12371	14284	13532	14978	27811	23360

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



Equipment: LC-I-902 GMS-2000
Temperature($^{\circ}$ C): 24.6

Date: 2022/5/30
Humidity(%): 59.6%

Operator: JUN WANG
Distance(m): 29.75

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	1.07	1.07	1.07	0.99	0.99	0.99	0.83	0.83	0.83	0.69	0.69	0.69	0.55	0.55	0.55	0.49
1	0.93	0.89	0.85	0.86	0.82	0.79	0.72	0.70	0.68	0.60	0.58	0.57	0.49	0.47	0.46	0.41
2	0.81	0.75	0.70	0.75	0.70	0.65	0.64	0.60	0.56	0.53	0.50	0.48	0.43	0.41	0.39	0.35
3	0.72	0.64	0.58	0.66	0.60	0.55	0.56	0.51	0.47	0.47	0.43	0.40	0.38	0.36	0.34	0.30
4	0.64	0.56	0.50	0.59	0.52	0.47	0.50	0.45	0.41	0.42	0.38	0.35	0.34	0.32	0.29	0.26
5	0.57	0.49	0.43	0.53	0.46	0.40	0.45	0.39	0.35	0.38	0.34	0.30	0.31	0.28	0.26	0.22
6	0.51	0.43	0.37	0.47	0.40	0.35	0.41	0.35	0.31	0.34	0.30	0.27	0.28	0.25	0.23	0.20
7	0.46	0.38	0.33	0.43	0.36	0.31	0.37	0.31	0.27	0.31	0.27	0.24	0.26	0.23	0.20	0.18
8	0.42	0.34	0.29	0.39	0.32	0.27	0.34	0.28	0.24	0.29	0.24	0.21	0.24	0.21	0.18	0.16
9	0.38	0.31	0.26	0.36	0.29	0.25	0.31	0.26	0.22	0.26	0.22	0.19	0.22	0.19	0.17	0.14
10	0.35	0.28	0.23	0.33	0.26	0.22	0.29	0.23	0.20	0.24	0.20	0.17	0.21	0.17	0.15	0.13

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Intensity data(cd)										Appendix Page: 10 Total:12	
C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0		
0.0	444.23	451.32	449.55	441.57	429.15	409.65	385.71	358.22	328.07		
15.0	444.23	454.85	458.39	453.96	442.46	426.53	403.52	376.97	345.12		
30.0	444.23	459.30	467.28	465.51	457.53	438.91	414.08	385.71	354.67		
45.0	444.23	463.85	472.77	474.56	465.64	446.90	421.93	390.71	356.81		
60.0	444.23	466.48	477.17	478.95	469.15	451.35	423.75	391.70	356.09		
75.0	444.23	466.22	478.53	479.41	468.86	449.51	421.36	388.81	352.74		
90.0	444.23	464.50	475.96	475.96	465.38	446.87	420.43	386.05	351.68		
105.0	444.23	462.77	471.61	470.72	461.89	443.34	415.97	385.94	353.26		
120.0	444.23	458.39	464.58	461.93	453.08	433.61	408.83	380.51	348.66		
135.0	444.23	454.83	456.59	451.29	438.93	420.38	397.42	368.28	336.48		
150.0	444.23	448.64	445.11	435.40	421.27	400.07	375.34	347.96	317.94		
165.0	444.23	438.92	426.53	407.95	385.82	360.16	331.84	299.10	266.36		
180.0	444.23	431.81	414.08	391.91	365.31	335.17	303.25	268.66	234.97		
195.0	444.23	426.53	403.52	375.20	344.23	309.72	273.44	237.16	200.88		
210.0	444.23	422.06	391.91	359.99	324.53	287.28	250.04	210.14	170.24		
225.0	444.23	418.36	385.35	350.57	310.42	270.28	228.36	189.11	147.18		
240.0	444.23	416.63	381.02	342.74	301.79	259.95	218.11	175.38	135.32		
255.0	444.23	415.20	378.25	338.67	298.20	255.10	213.76	170.65	128.43		
270.0	444.23	416.02	382.53	345.51	303.20	262.66	219.47	178.93	136.62		
285.0	444.23	420.38	388.59	353.26	315.29	273.78	234.92	193.41	153.67		
300.0	444.23	423.87	397.33	365.47	330.07	292.91	255.74	216.80	179.64		
315.0	444.23	429.21	407.14	380.64	348.85	316.17	298.51	243.75	209.31		
330.0	444.23	434.51	418.62	398.30	371.81	342.66	310.87	277.31	242.87		
345.0	444.23	444.23	438.03	426.53	407.95	386.71	360.16	330.96	299.99		
360.0	444.23	451.32	449.55	441.57	429.15	409.65	385.71	358.22	328.07		
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0		
0.0	297.93	264.23	230.54	196.84	165.81	133.89	103.74	74.48	46.11		
15.0	314.15	279.63	246.89	215.03	183.18	152.21	123.00	92.92	65.48		
30.0	320.98	286.40	251.82	220.78	188.86	160.49	133.00	105.52	79.80		
45.0	322.91	286.34	253.33	220.33	190.89	162.35	135.59	110.61	86.53		
60.0	319.59	283.09	249.27	218.11	187.84	160.24	135.32	110.39	88.13		
75.0	316.68	278.85	244.55	212.00	183.85	157.46	132.83	109.96	87.09		
90.0	314.66	278.52	245.91	214.18	185.09	157.77	132.21	108.41	86.38		
105.0	317.05	280.84	248.17	216.37	186.35	158.08	131.59	105.98	82.13		
120.0	315.91	280.52	246.89	214.15	184.06	155.75	128.31	100.00	74.33		
135.0	303.81	271.13	238.45	205.78	173.98	143.07	113.93	85.67	58.29		
150.0	285.26	251.70	219.91	186.35	155.44	123.64	92.73	62.70	36.21		
165.0	234.50	200.88	166.36	132.74	100.00	69.91	41.59	17.70	2.65		
180.0	199.50	164.04	130.34	96.65	63.84	34.58	11.53	1.77	0.89		
195.0	163.71	128.31	91.15	59.29	28.32	7.08	1.77	0.88	0.88		
210.0	133.00	96.65	59.41	28.37	5.32	1.77	0.89	0.89	0.89		
225.0	109.72	71.36	36.57	8.92	0.89	0.89	0.89	0.89	0.89		
240.0	93.47	56.98	23.15	2.67	0.89	0.89	0.89	0.89	0.89		
255.0	88.85	52.78	20.23	1.76	0.88	0.88	0.88	0.88	0.88		
270.0	97.84	59.05	26.44	2.64	0.88	0.88	0.88	0.88	0.88		
285.0	113.04	76.83	43.27	25.61	0.88	0.88	0.88	0.88	0.88		
300.0	158.40	103.54	69.02	35.40	9.73	0.88	0.88	0.88	0.88		
315.0	172.22	136.89	102.45	68.89	37.09	12.36	1.77	0.88	0.88		
330.0	209.31	174.86	140.42	106.86	74.19	45.04	19.43	3.53	0.88		
345.0	268.13	234.50	200.88	168.13	135.39	103.54	73.45	44.25	19.47		
360.0	297.93	264.23	230.54	196.84	165.81	133.89	103.74	74.48	46.11		

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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	18.62	39.90	67.39	97.54	127.68	158.72	189.75	222.56	255.36		
15.0	43.36	67.25	93.80	123.00	151.32	182.29	213.26	245.12	276.98		
30.0	62.95	87.78	113.50	139.21	166.70	195.96	226.99	258.91	289.94		
45.0	76.71	100.80	123.99	149.86	174.84	202.49	231.93	264.04	296.15		
60.0	84.57	107.72	129.08	152.23	178.05	203.86	231.46	262.62	296.45		
75.0	86.21	107.32	130.19	152.18	176.81	201.44	228.71	260.38	293.81		
90.0	85.50	106.65	129.57	153.36	177.16	204.49	231.81	262.66	294.39		
105.0	80.37	103.33	127.17	151.90	178.40	204.89	234.04	264.95	296.74		
120.0	69.91	92.92	119.46	146.01	172.56	202.65	232.73	263.70	295.56		
135.0	50.34	76.83	104.21	131.59	160.73	191.64	222.56	255.23	288.79		
150.0	25.61	50.34	77.72	108.63	138.66	169.57	201.36	235.80	269.36		
165.0	3.54	19.47	44.25	73.45	104.42	137.16	170.79	205.30	238.04		
180.0	0.89	0.89	3.55	18.62	44.33	73.59	107.29	140.98	175.56		
195.0	0.88	0.88	0.88	1.77	12.39	36.28	67.25	100.88	136.28		
210.0	0.89	0.89	0.89	0.89	1.77	9.75	34.58	67.39	104.63		
225.0	0.89	0.89	0.89	0.89	0.89	0.89	14.27	42.82	77.61		
240.0	0.89	0.89	0.89	0.89	0.89	0.89	3.56	26.71	59.65		
255.0	0.88	0.88	0.88	0.88	0.88	0.88	7.04	21.11	52.78		
270.0	0.88	0.88	0.88	0.88	0.88	0.88	2.64	23.80	55.53		
285.0	0.88	0.88	0.88	0.88	1.77	1.77	8.83	36.21	71.54		
300.0	0.88	0.88	0.88	1.77	1.77	5.31	28.32	59.29	93.80		
315.0	0.88	0.88	0.88	1.77	7.07	28.26	59.17	92.73	128.06		
330.0	0.88	0.88	1.77	11.48	34.44	62.70	96.26	130.71	165.15		
345.0	0.88	2.65	18.58	42.48	71.68	103.54	136.28	169.90	204.42		
360.0	18.62	39.90	67.39	97.54	127.68	158.72	189.75	222.56	255.36		
C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0		
0.0	288.17	319.21	349.35	376.84	401.67	420.29	436.25	445.11	447.77		
15.0	309.72	340.69	371.66	399.98	422.10	439.80	451.31	456.62	453.96		
30.0	323.64	355.56	386.59	414.08	437.13	454.87	463.73	464.62	457.53		
45.0	330.94	364.84	398.73	428.17	453.15	469.20	477.23	477.23	467.42		
60.0	331.17	366.78	400.61	432.65	458.47	475.39	484.29	481.62	469.15		
75.0	328.11	365.06	398.49	429.27	456.54	475.02	482.93	479.41	467.10		
90.0	329.65	362.26	397.51	427.48	453.04	469.79	477.72	475.96	461.86		
105.0	331.18	363.86	396.54	425.68	449.53	466.31	473.37	470.72	460.12		
120.0	328.30	361.93	392.90	422.99	444.23	461.04	469.01	468.12	461.04		
135.0	321.47	353.26	383.29	409.78	430.98	447.76	458.36	460.12	457.47		
150.0	301.16	332.95	362.09	389.47	413.32	432.75	445.11	453.06	453.94		
165.0	272.55	306.18	336.27	367.24	392.90	415.91	432.72	446.00	453.96		
180.0	209.26	243.84	277.53	311.23	343.15	371.52	397.23	417.63	434.47		
195.0	171.67	208.84	245.12	280.52	315.03	348.66	379.63	406.18	429.18		
210.0	140.10	178.22	217.24	254.48	293.49	328.96	378.61	396.35	423.83		
225.0	115.07	154.32	193.57	256.90	275.64	316.67	355.92	390.71	424.60		
240.0	116.62	137.10	178.94	220.78	264.40	305.35	348.08	386.36	420.19		
255.0	88.85	128.43	169.77	212.88	254.22	297.32	338.67	377.37	414.32		
270.0	92.55	133.09	173.64	215.06	257.37	298.80	341.10	378.12	412.50		
285.0	107.75	145.72	187.23	227.85	268.48	307.34	347.96	383.29	415.97		
300.0	132.74	169.90	209.72	249.55	288.48	324.76	360.16	392.90	421.22		
315.0	164.27	200.48	237.57	274.66	309.99	345.31	377.99	405.37	428.33		
330.0	200.48	235.80	270.25	305.57	337.37	368.28	395.65	417.73	435.40		
345.0	238.93	271.67	304.41	337.15	367.24	392.90	415.91	434.49	446.00		
360.0	288.17	319.21	349.35	376.84	401.67	420.29	436.25	445.11	447.77		

Light Blue USA & Associates LLC LED lamp

Intensity data(cd)

Appendix Page: 12 Total:12

C/γ(°)	180.0
0.0	444.23
15.0	448.65
30.0	444.23
45.0	447.80
60.0	447.79
75.0	444.23
90.0	440.70
105.0	440.69
120.0	444.23
135.0	445.11
150.0	447.76
165.0	453.08
180.0	444.23
195.0	448.65
210.0	444.23
225.0	447.80
240.0	447.79
255.0	444.23
270.0	440.70
285.0	440.69
300.0	444.23
315.0	445.11
330.0	447.76
345.0	453.08
360.0	444.23