

# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

## Indoor Luminaire Photometric Data

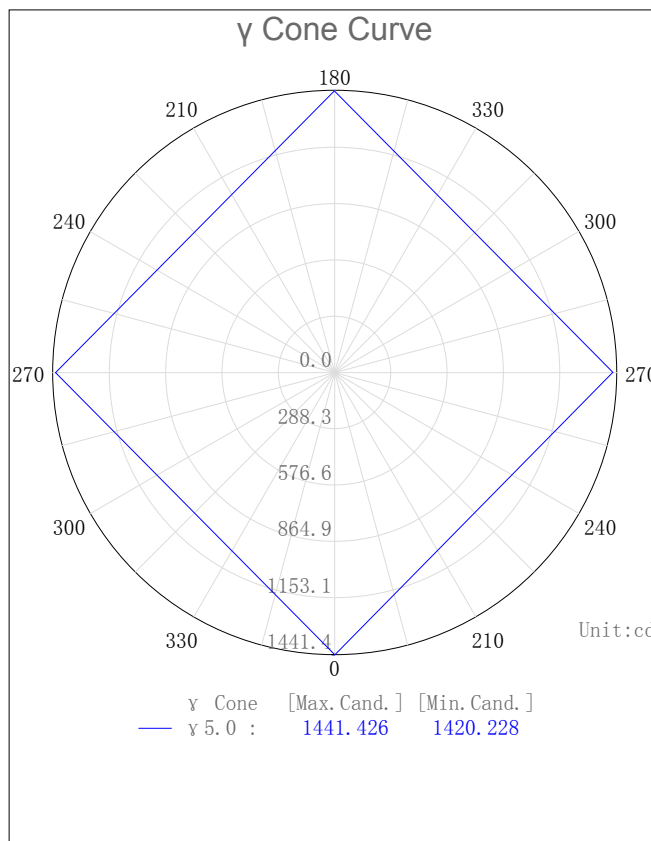
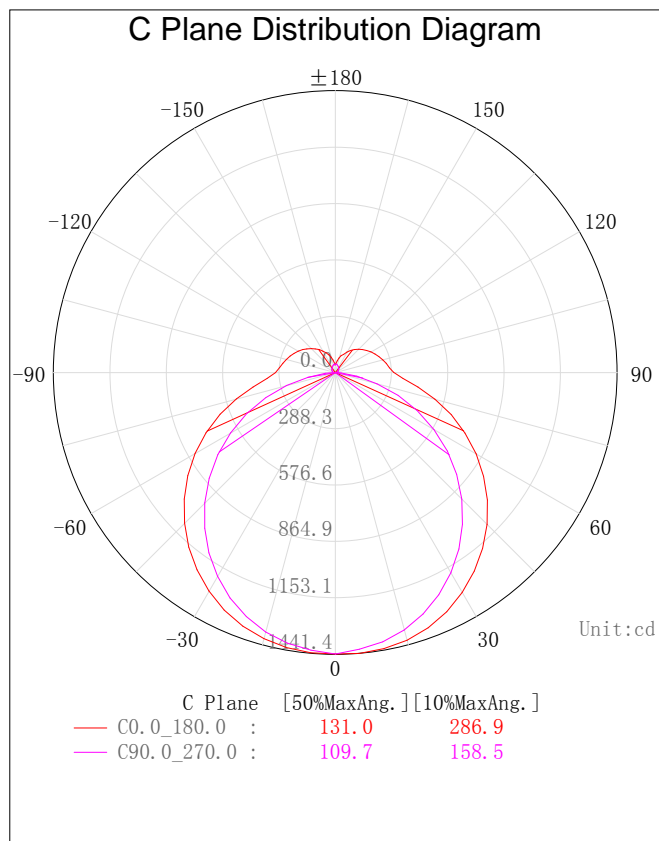
### Description Information

Lum. Name:	KARLIN5FCCT	Lum. Catalog:	LED BATTEN	Test ID:	
Lamp Name:	3000K	Lamp Catalog:	SMD2835	Test Date:	2020/07/23
Manufacture:		ShldAngle(°):		Test Machine:	GON-2000
Test Lab:		Frequency(Hz):		Lamp CCT(K):	Ra:
Lum. Size(W*L*H):	0.060m*1.500m*0.065m	Lum. Area(m2):	0.188	Lum. W(kg):	2.000
Test System:	C, γ	Test Step:	C=90.0 γ=5.0	Temp.(°C):	25
				Humidity(%):	

### Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm):	5312.830	Luminaire Flux:	5312.827lm
Rated Power(W):		Luminaire Efficiency:	100.00%
Rated Voltage(V):		Luminaire EER(lm/W):	109.430
Tested Power(W):	48.550	Max. Cand.(cd):	1441.426
Lamps' Inside:	1	Max Cand@Ang.(°):	C=0.0 γ=5.0
Tested Electric:U=225.6V, I=0.223A, PF=0.000		Beam Angle(50%Imax):	131.0
Lamp Size(W*L*H):0.060m*1.500m*0.065m		Left=-65.4 Right=65.6	
		Field Angle(10%Imax):	286.9
		Down Lumens&Percent:	4606.560lm 86.71%
		Up Lumens&Percent:	706.267lm 13.29%
		S/MH:	C0_a180=1.337 C90_270=1.236
		CIE Type:	General Diffuse
		ErP Φuse(120°):	3369.088lm
		IRF:	104.346%

### Lighting Distribution Diagram



# IES Indoor Report

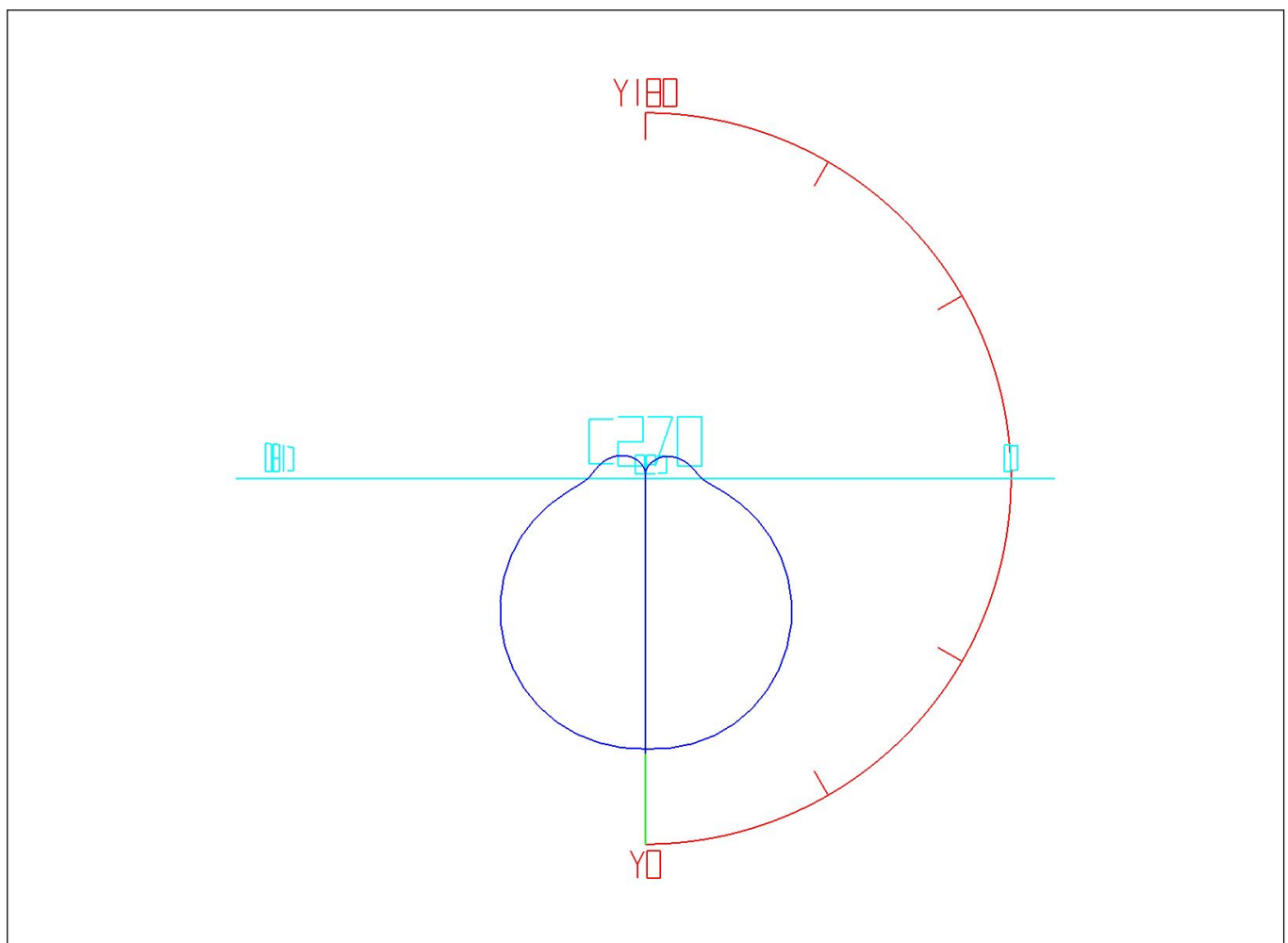
Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

---

## 3D Light Intensity Distribution Modal

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

### 3D Light Intensity Distribution Modal



Curves: 3D Model ——— Fixture ——— Vert. HUD ——— Hori. HUD ———  
View Angles: Orient:0 Tilt:0 Roll:0 Spin:0

---

# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

---

## Zonal Flux Tabulation

Zone ( y )	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	34.30	34.30	0.65	0.65
5.0-10.0	101.84	136.15	1.92	2.56
10.0-15.0	166.44	302.59	3.13	5.70
15.0-20.0	225.98	528.57	4.25	9.95
20.0-25.0	278.51	807.08	5.24	15.19
25.0-30.0	322.32	1129.40	6.07	21.26
30.0-35.0	356.12	1485.52	6.70	27.96
35.0-40.0	379.02	1864.54	7.13	35.10
40.0-45.0	390.38	2254.92	7.35	42.44
45.0-50.0	389.96	2644.88	7.34	49.78
50.0-55.0	377.90	3022.78	7.11	56.90
55.0-60.0	354.67	3377.44	6.68	63.57
60.0-65.0	321.09	3698.53	6.04	69.62
65.0-70.0	278.51	3977.04	5.24	74.86
70.0-75.0	229.02	4206.06	4.31	79.17
75.0-80.0	176.49	4382.55	3.32	82.49
80.0-85.0	128.19	4510.74	2.41	84.90
85.0-90.0	95.82	4606.56	1.80	86.71
90.0-95.0	82.59	4689.15	1.55	88.26
95.0-100.0	77.68	4766.82	1.46	89.72
100.0-105.0	73.36	4840.19	1.38	91.10
105.0-110.0	68.71	4908.90	1.29	92.40
110.0-115.0	63.68	4972.57	1.20	93.60
115.0-120.0	58.33	5030.90	1.10	94.69
120.0-125.0	52.65	5083.55	0.99	95.68
125.0-130.0	46.69	5130.24	0.88	96.56
130.0-135.0	40.65	5170.89	0.77	97.33
135.0-140.0	34.79	5205.67	0.65	97.98
140.0-145.0	29.18	5234.85	0.55	98.53
145.0-150.0	23.77	5258.62	0.45	98.98
150.0-155.0	18.72	5277.33	0.35	99.33
155.0-160.0	14.25	5291.59	0.27	99.60
160.0-165.0	10.20	5301.79	0.19	99.79
165.0-170.0	6.55	5308.34	0.12	99.92
170.0-175.0	3.49	5311.82	0.07	99.98
175.0-180.0	1.00	5312.83	0.02	100.00

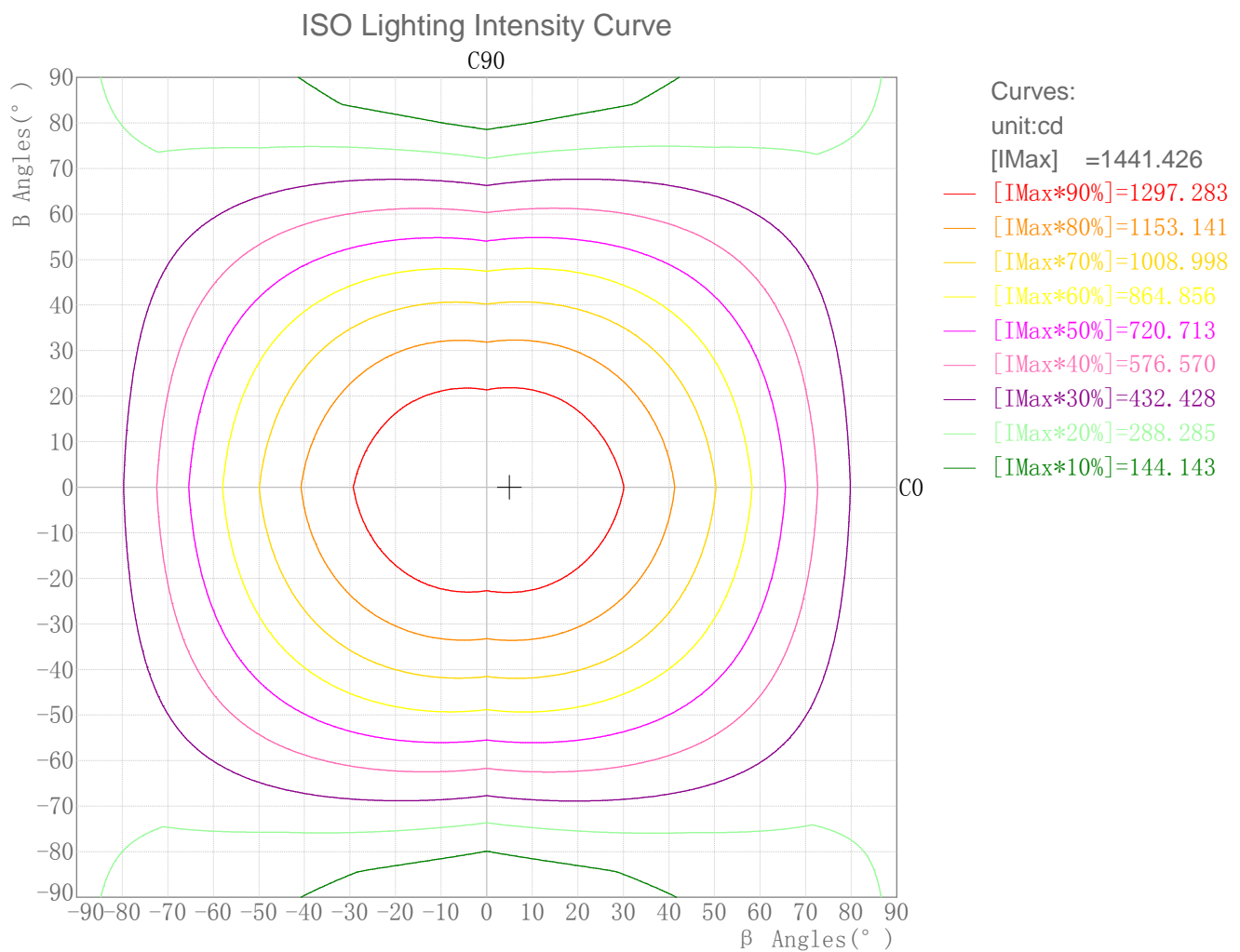
---

# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

## Rectangle ISO Lighting Intensity Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23



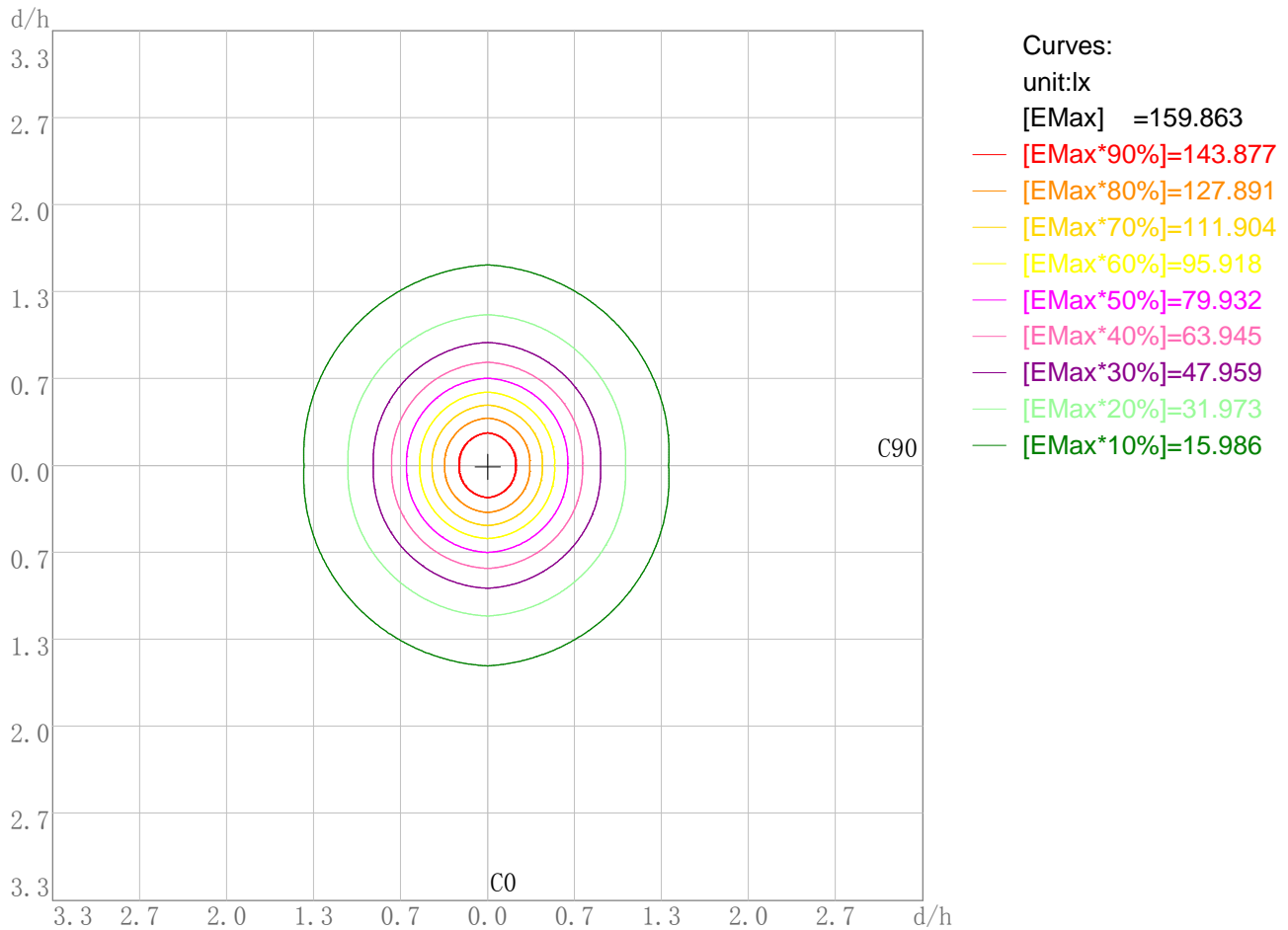
# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

## Plane ISO-Illuminance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

### Plane ISO-Illuminance Curve



Working Plane Luminaire Mounting Height(m): 3.00  
 Working Plane Maximum Illuminance(lx): 159.86  
 Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

# IES Indoor Report

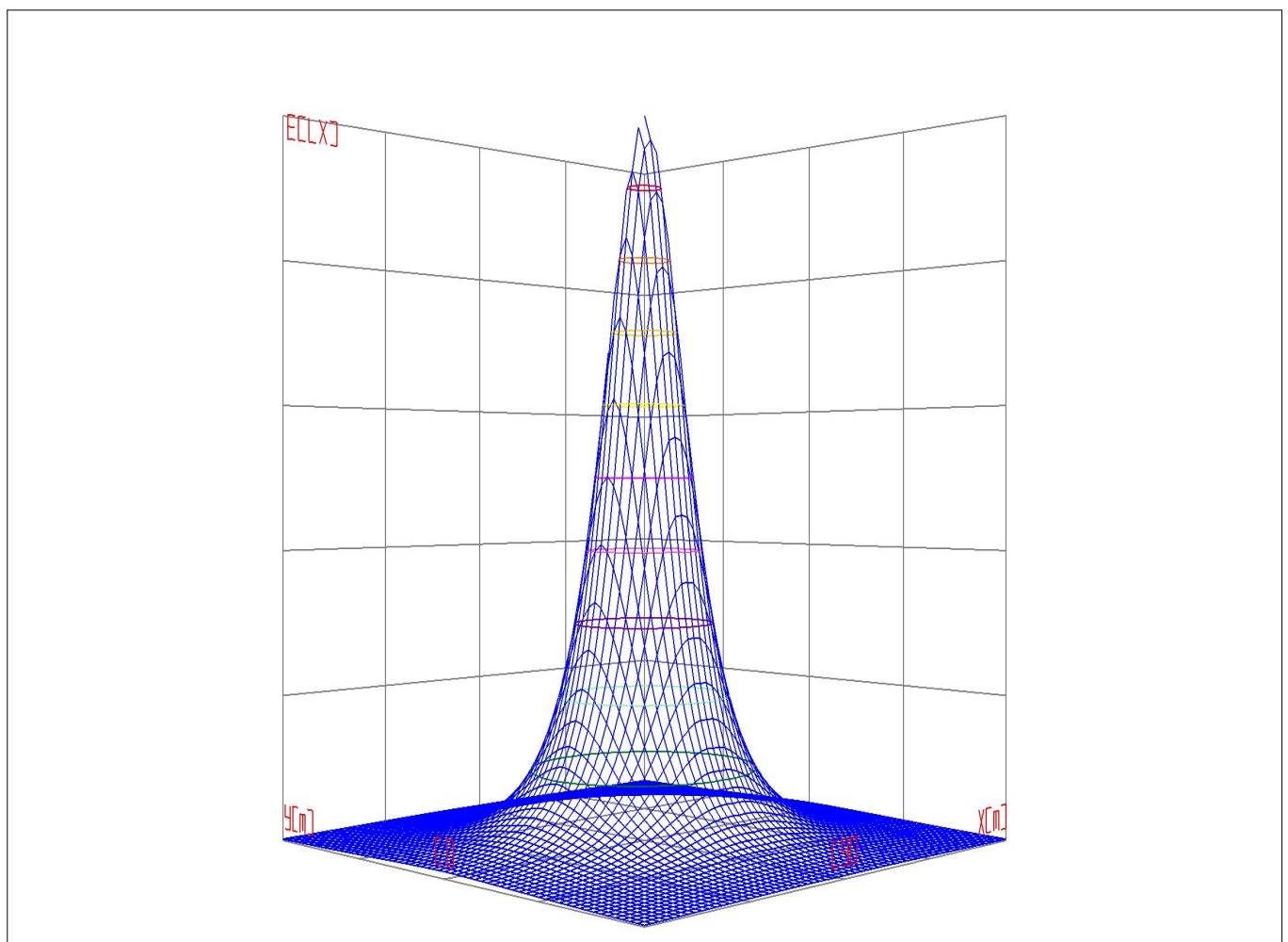
Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

---

## 3D Plane ISO Illuminance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

### 3D Plane Illuminance Modal



Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —  
View Angles(deg): 0    Height(m): 3.0    Distance(m): 10.0

---

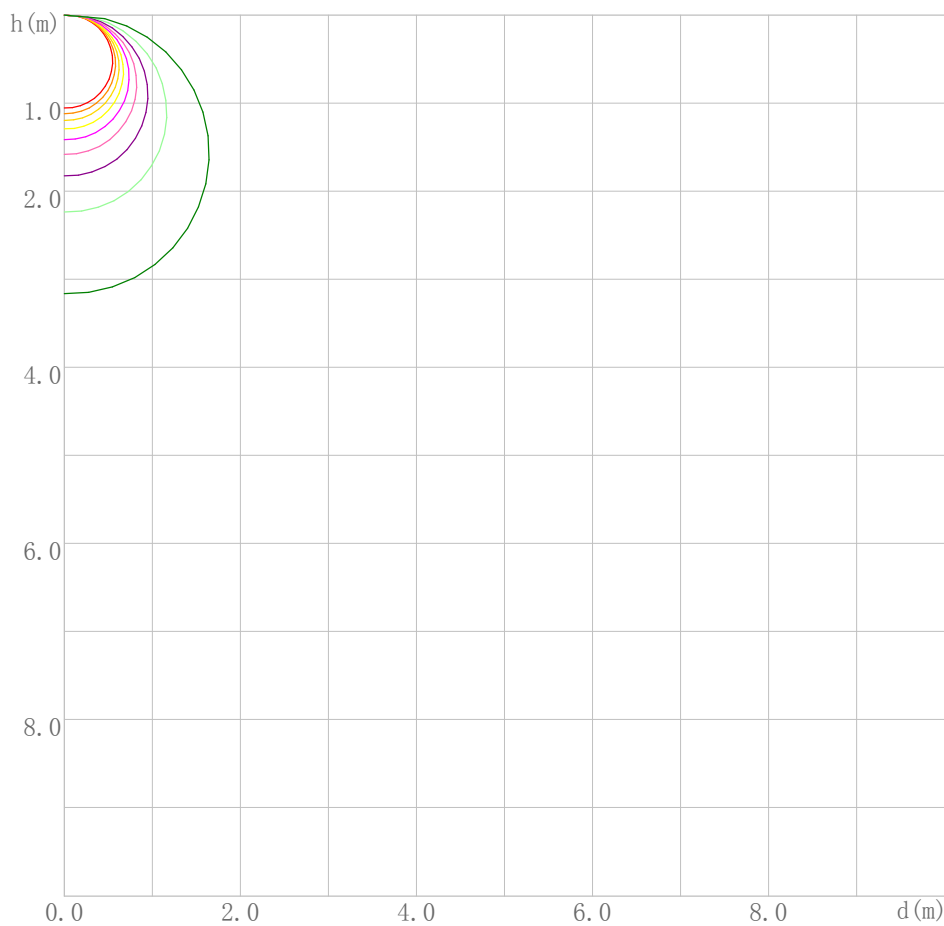
# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

## Space ISO Illuminance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

### Space ISO Illuminance Curve



- Curves:  
unit:lx  
[EMax] =1438.658
- [EMax\*90%]=1294.792
  - [EMax\*80%]=1150.926
  - [EMax\*70%]=1007.061
  - [EMax\*60%]=863.195
  - [EMax\*50%]=719.329
  - [EMax\*40%]=575.463
  - [EMax\*30%]=431.597
  - [EMax\*20%]=287.732
  - [EMax\*10%]=143.866

Space Plane Maximum Illuminance and @Angle:1438.66,0.0deg  
Plane Maximum Lighting Intensity and @Angle:1441.426cd,0deg

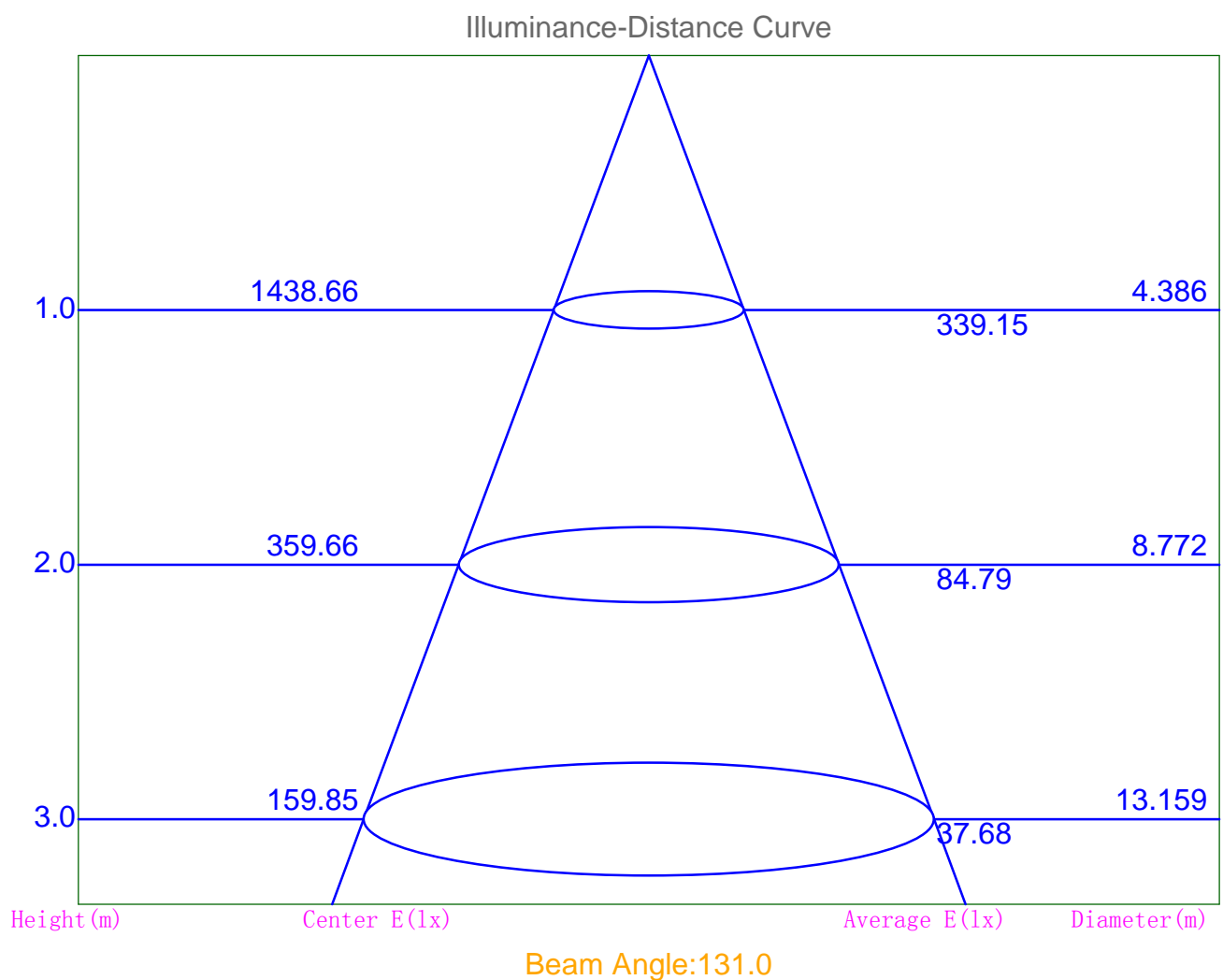
# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

---

## Illuminance-Distance Diagram

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23





# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

## Indoor Luminance Limiting Curves

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

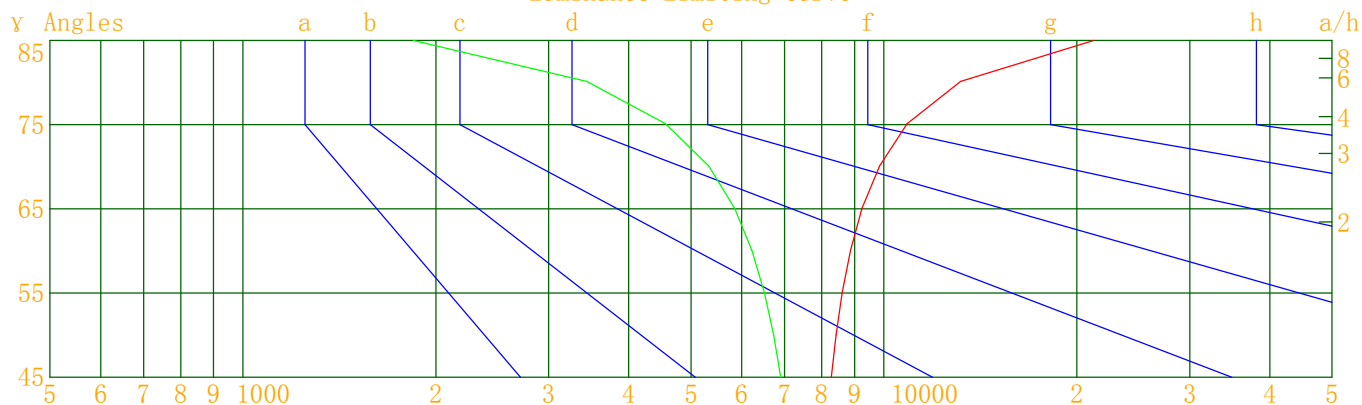
Glare Grade Table

GI	Quality	Using Illuminance							
		a	b	c	d	e	f	g	h
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	a				2000	1000	500	<=300
			b	c	d	e	f	g	h

Luminance Table

Gama (deg)	45	50	55	60	65	70	75	80	85
C0	8278	8420	8612	8872	9245	9846	10878	13173	21247
C90	6903	6727	6507	6225	5851	5327	4565	3438	1845

Luminance Limiting Curve



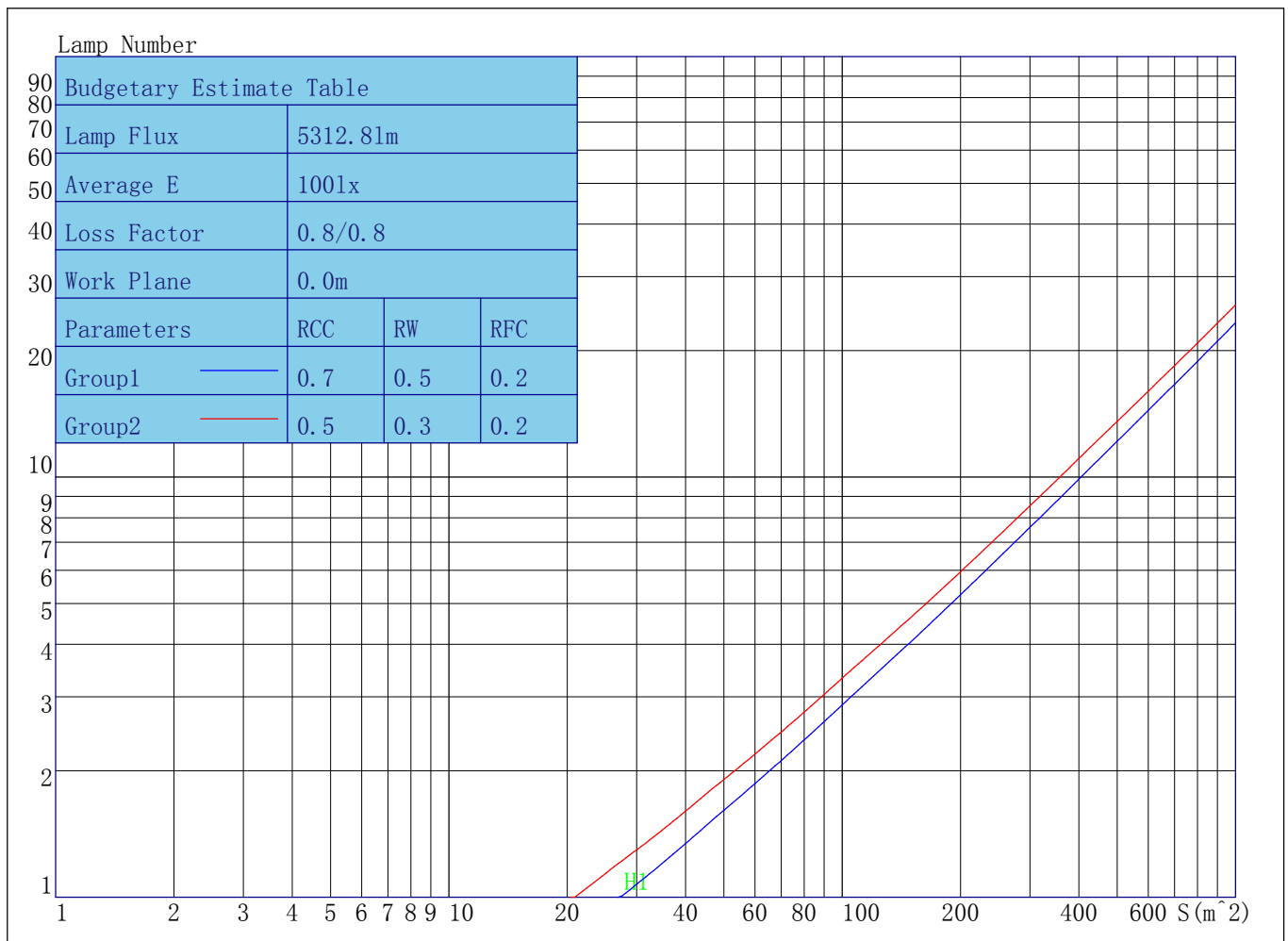
Luminous Size: Length(m)=1.500 Width(m)=0.060 Height(m)=0.065 Area(m^2)=0.187500  
 Luminous Type: Without Luminous Side  
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

## Indoor Budgetary Estimate Table

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23



Parameters1: Rhocc = 0.7 Rhow = 0.5 Rhofc = 0.2 LLF = 0.8

Parameters2: Rhocc = 0.5 Rhow = 0.3 Rhofc = 0.2 LLF = 0.8

Average Illuminance(lx): 100 Cavity Height: H1(m) = 2

# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

---

## Indoor Coefficient of Utilization Table

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

Coefficients of Utilization - Zonal Cavity Method																		
Coef.	Effective Floor Cavity Reflectance RFC=0.20																	
RhoCC (%)	80				70				50			30			10			0
RhoW (%)	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	Coefficient of Utilization(%)																	
0	116	116	116	116	112	112	112	112	104	104	104	96	96	96	90	90	90	87
1	104	99	94	90	100	96	91	87	89	85	82	83	80	77	77	75	73	70
2	94	86	78	72	90	83	76	70	77	71	67	72	67	63	67	63	60	57
3	86	75	66	60	82	72	64	58	67	61	55	63	57	53	59	54	50	47
4	78	66	57	50	75	64	55	49	59	52	47	56	50	45	52	47	43	40
5	72	59	50	43	69	57	48	42	53	46	40	50	43	39	47	41	37	34
6	66	53	44	37	63	51	43	36	48	40	35	45	39	34	42	37	32	30
7	61	48	39	33	59	46	38	32	43	36	31	41	34	30	38	33	29	26
8	57	43	35	29	55	42	34	28	40	32	27	37	31	26	35	30	26	23
9	53	40	31	26	51	39	31	25	36	29	25	34	28	24	32	27	23	21
10	50	36	29	23	48	36	28	23	34	27	22	32	26	22	30	25	21	19

---

# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

## Unified Glare Rating Table

Lum. Name: KARLIN5FCCT	Lum. Catalog: LED BATTEN	Test ID:
Lamp Name: 3000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2020/07/23

## Unified Glare Rating Table

Ceiling RCC	0.70	0.70	0.50	0.50	0.30	0.70	0.70	0.50	0.50	0.30
Wall RW	0.50	0.30	0.50	0.30	0.30	0.50	0.30	0.50	0.30	0.30
Floor RFC	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Room Size	Viewed crosswise					Viewed endwise				
X=2H Y=2H	16.2	19.5	17.5	20.8	22.2	14.5	17.7	15.8	19.1	20.5
Y=3H	22.2	25.5	23.5	26.8	28.2	18.8	22.0	20.1	23.4	24.7
Y=4H	26.0	28.9	27.4	30.2	31.7	21.1	24.0	22.5	25.4	26.8
Y=6H	29.4	32.2	30.8	33.6	35.0	22.4	25.2	23.8	26.6	28.0
Y=8H	31.2	34.0	32.6	35.4	36.8	22.8	25.6	24.2	26.9	28.3
Y=12H	33.3	36.0	34.6	37.4	38.8	23.0	25.7	24.3	27.1	28.5
X=4H Y=2H	17.5	20.3	18.8	21.7	23.1	16.8	19.7	18.2	21.0	22.4
Y=3H	23.7	26.6	25.1	28.0	29.4	21.4	24.2	22.7	25.6	27.0
Y=4H	26.0	27.8	27.6	29.4	31.1	22.3	24.1	24.0	25.7	27.4
Y=6H	30.0	31.6	31.7	33.3	34.9	24.2	25.9	25.9	27.5	29.2
Y=8H	32.2	33.8	33.9	35.5	37.1	24.9	26.5	26.6	28.2	29.8
Y=12H	33.9	35.2	35.7	37.0	38.7	24.5	25.8	26.3	27.6	29.3
X=8H Y=4H	26.3	27.9	28.0	29.6	31.2	23.4	25.0	25.1	26.6	28.3
Y=6H	29.8	30.9	31.6	32.7	34.5	25.0	26.1	26.8	27.9	29.7
Y=8H	31.8	32.7	33.7	34.6	36.4	25.6	26.6	27.5	28.4	30.2
Y=12H	34.8	35.7	36.7	37.5	39.4	26.6	27.4	28.5	29.3	31.1
X=12H Y=4H	25.4	26.7	27.2	28.5	30.3	22.8	24.1	24.6	25.8	27.6
Y=6H	29.3	30.3	31.2	32.1	34.0	24.9	25.9	26.8	27.7	29.6
Y=8H	31.9	32.8	33.8	34.6	36.5	26.3	27.1	28.2	29.0	30.8
Variations with the observer position at spacings										
S=1.0H	2.1/-2.0					2.3/-0.3				
S=1.5H	-2.0/-20.3					-0.3/-16.6				
S=2.0H	-2.0/-20.3					-0.3/-16.6				

# IES Indoor Report

Photometric Filename:KARLIN5FCCT-3K-2020-07-23.IES

---

## Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
Y 0.0	1438.66	1438.66	1438.66	1438.66
Y 5.0	1441.43	1420.23	1437.88	1424.15
Y 10.0	1433.41	1397.89	1427.47	1405.20
Y 15.0	1416.25	1362.05	1408.49	1372.68
Y 20.0	1387.75	1313.84	1379.14	1328.06
Y 25.0	1348.56	1253.77	1339.52	1271.21
Y 30.0	1298.59	1182.63	1290.12	1203.32
Y 35.0	1239.74	1102.19	1231.26	1125.59
Y 40.0	1172.61	1012.83	1164.30	1038.43
Y 45.0	1097.52	915.26	1089.33	943.19
Y 50.0	1014.86	810.80	1007.67	840.82
Y 55.0	926.18	699.82	919.92	731.89
Y 60.0	831.77	583.60	826.96	617.34
Y 65.0	732.62	463.67	728.67	498.51
Y 70.0	631.39	341.59	626.24	377.04
Y 75.0	527.89	221.55	523.11	255.99
Y 80.0	428.90	111.92	426.54	142.46
Y 85.0	347.21	30.15	349.37	50.56
Y 90.0	299.24	7.07	305.66	10.50
Y 95.0	278.12	9.29	285.38	11.22
Y 100.0	264.41	11.83	271.59	11.65
Y 105.0	251.47	13.64	258.73	13.40
Y 110.0	238.14	15.50	245.45	15.13
Y 115.0	224.42	17.55	231.96	17.79
Y 120.0	210.45	19.82	217.85	19.85
Y 125.0	196.27	21.90	203.26	21.68
Y 130.0	181.54	23.71	188.11	22.41
Y 135.0	166.79	25.56	172.93	23.65
Y 140.0	152.10	27.42	157.82	25.28
Y 145.0	136.57	30.44	142.23	27.63
Y 150.0	119.90	33.31	125.44	30.14
Y 155.0	102.48	35.99	111.18	33.11
Y 160.0	90.59	38.11	96.17	35.96
Y 165.0	74.78	40.17	80.53	38.68
Y 170.0	60.32	42.44	63.87	40.81
Y 175.0	47.28	44.01	48.38	43.09
Y 180.0	38.14	38.14	38.14	38.14

---