

Indoor Luminaire Photometric Data

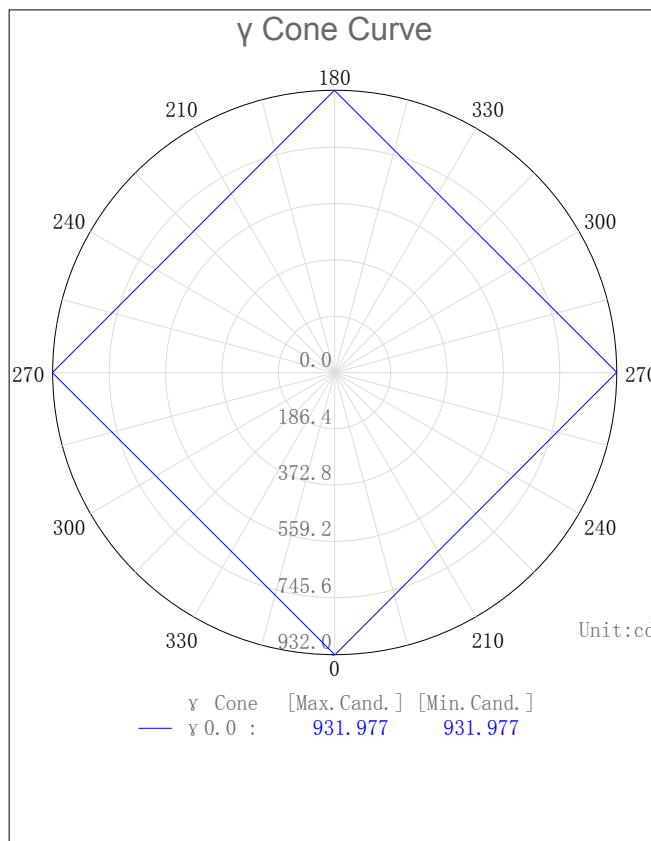
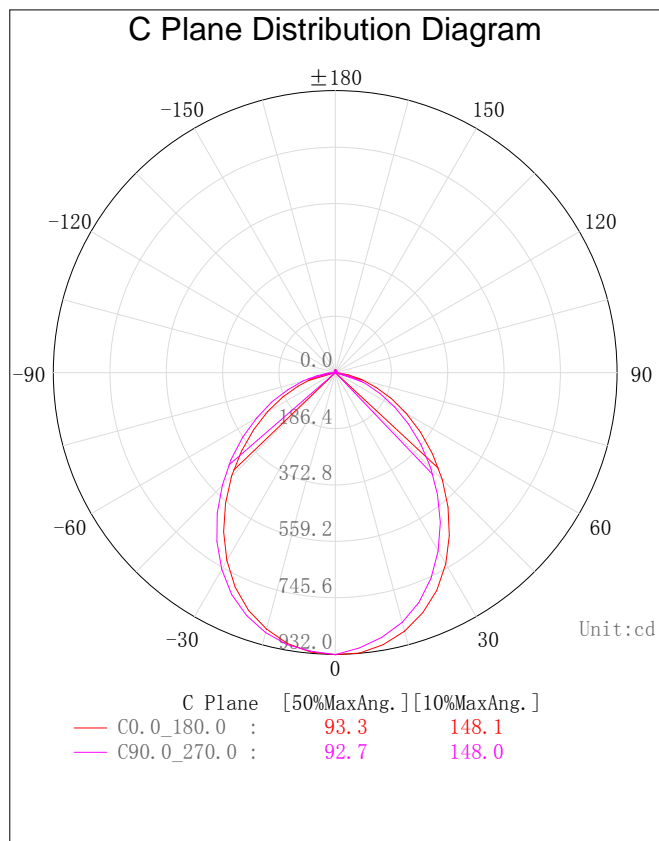
Description Information

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Date: 2019/06/11
Manufacture:	ShldAngle(°):	Test Machine:GON-2000
Test Lab:	Frequency(Hz):	Lamp CCT(K): Ra:
Lum. Size(W*L*H):0.190m*0.190m*0.050m	Lum. Area(m2):0.046	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): 2095.720	Luminaire Flux: 2095.724lm	Field Angle(10%Imax): 148.1	
Rated Power(W):	Luminaire Efficiency: 100.00%	Down Lumens&Percent: 2081.982lm 99.34%	
Rated Voltage(V):	Luminaire EER(lm/W): 103.749	Up Lumens&Percent: 13.742lm 0.66%	
Tested Power(W): 20.200	Max. Cand. (cd): 931.977	S/MH: C0_a180=1.163 C90_270=1.153	
Lamps' Inside: 1	Max Cand@Ang. (°): C=0.0 γ=0.0	CIE Type: Semi-Direct	
Tested Electric:U=238.2V, I=0.087A, PF=0.000	Beam Angle(50%Imax): 93.3	ErP Φuse(120°): 1755.931lm	
Lamp Size(W*L*H):0.190m*0.190m*0.050m	Left=-46.1 Right=47.2	IRF: 125.505%	

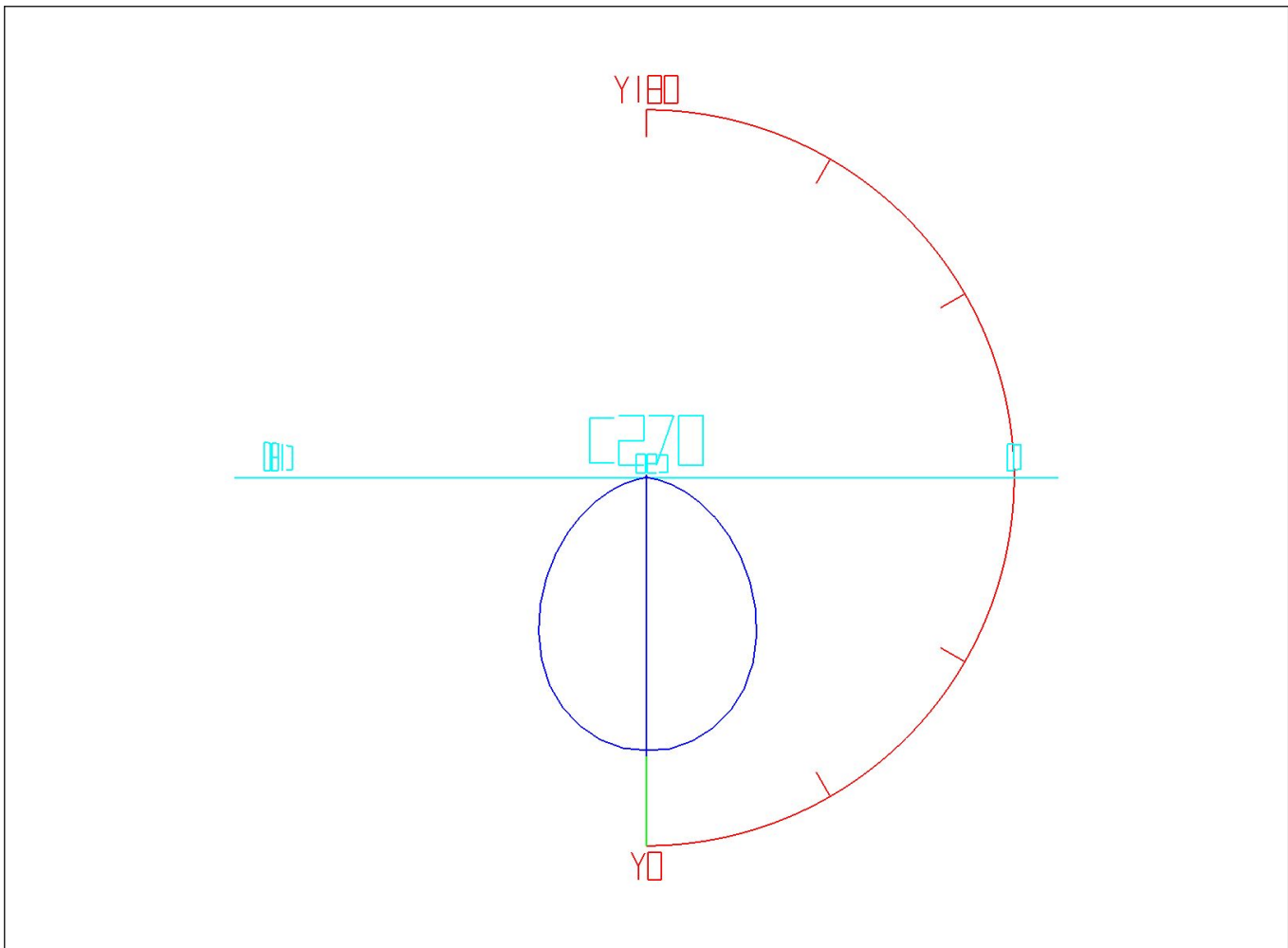
Lighting Distribution Diagram



3D Light Intensity Distribution Modal

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
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Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11

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

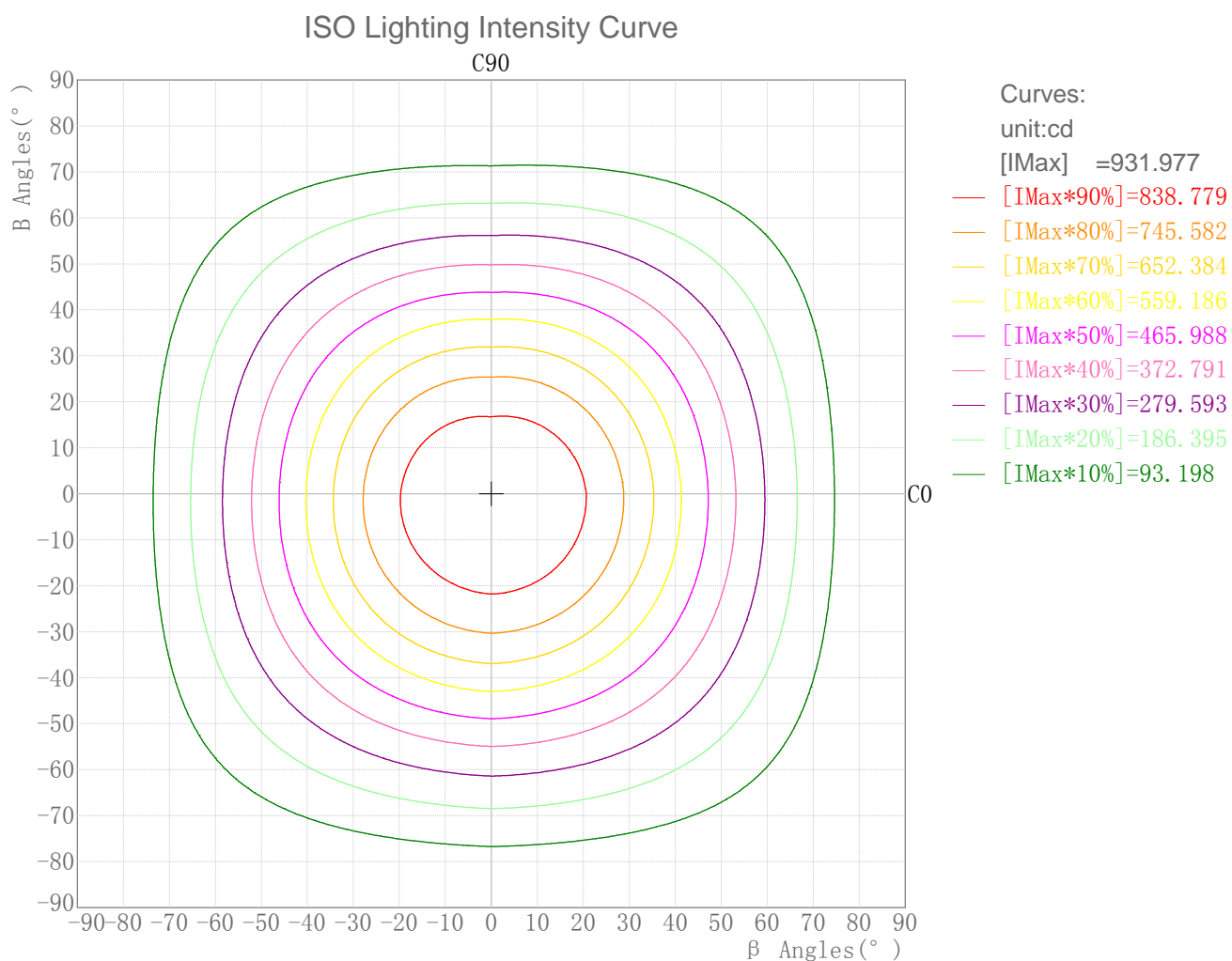
Photometric Filename:ICDLR20W4K-WH.IES

Zonal Flux Tabulation

Zone (y)	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-5.0	22.19	22.19	1.06	1.06
5.0-10.0	65.48	87.67	3.12	4.18
10.0-15.0	105.78	193.45	5.05	9.23
15.0-20.0	141.20	334.65	6.74	15.97
20.0-25.0	170.00	504.65	8.11	24.08
25.0-30.0	190.32	694.97	9.08	33.16
30.0-35.0	201.17	896.14	9.60	42.76
35.0-40.0	202.85	1098.99	9.68	52.44
40.0-45.0	196.05	1295.04	9.35	61.79
45.0-50.0	181.97	1477.01	8.68	70.48
50.0-55.0	162.25	1639.26	7.74	78.22
55.0-60.0	138.42	1777.68	6.60	84.82
60.0-65.0	112.02	1889.69	5.34	90.17
65.0-70.0	84.54	1974.23	4.03	94.20
70.0-75.0	57.55	2031.77	2.75	96.95
75.0-80.0	33.00	2064.78	1.57	98.52
80.0-85.0	13.86	2078.64	0.66	99.19
85.0-90.0	3.34	2081.98	0.16	99.34
90.0-95.0	0.29	2082.27	0.01	99.36
95.0-100.0	0.00	2082.27	0.00	99.36
100.0-105.0	0.00	2082.27	0.00	99.36
105.0-110.0	0.07	2082.34	0.00	99.36
110.0-115.0	0.27	2082.61	0.01	99.37
115.0-120.0	0.54	2083.15	0.03	99.40
120.0-125.0	0.82	2083.97	0.04	99.44
125.0-130.0	1.05	2085.02	0.05	99.49
130.0-135.0	1.24	2086.25	0.06	99.55
135.0-140.0	1.37	2087.62	0.07	99.61
140.0-145.0	1.43	2089.06	0.07	99.68
145.0-150.0	1.44	2090.49	0.07	99.75
150.0-155.0	1.37	2091.87	0.07	99.82
155.0-160.0	1.25	2093.12	0.06	99.88
160.0-165.0	1.07	2094.19	0.05	99.93
165.0-170.0	0.82	2095.02	0.04	99.97
170.0-175.0	0.52	2095.54	0.03	99.99
175.0-180.0	0.18	2095.72	0.01	100.00

Rectangle ISO Lighting Intensity Diagram

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
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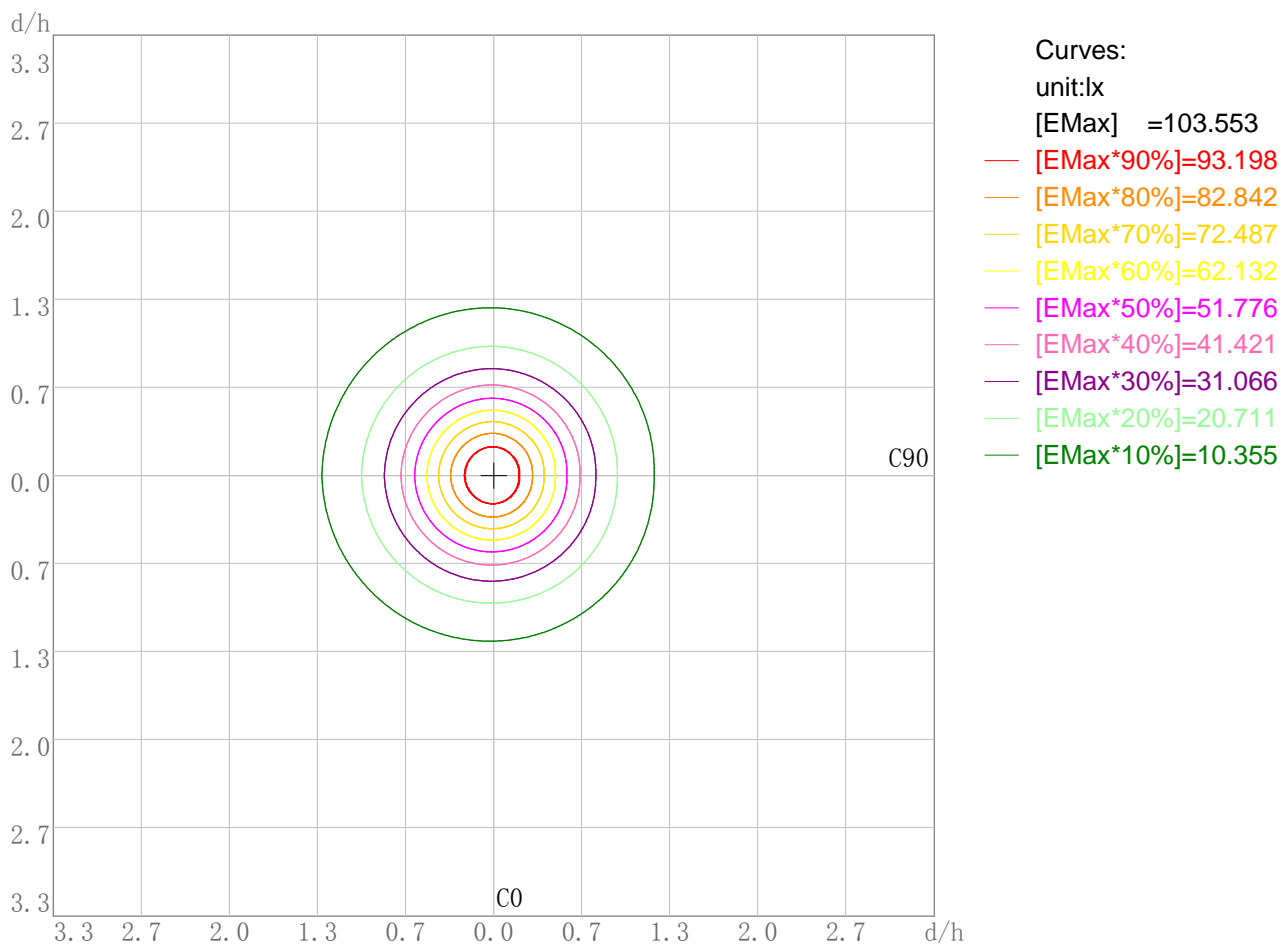


Maximum Light Intensity(cd): 931.98
Maximum Cand.@Angle: H=0.0°,V=0.0°

Plane ISO-Illuminance Diagram

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11

Plane ISO-Illuminance Curve

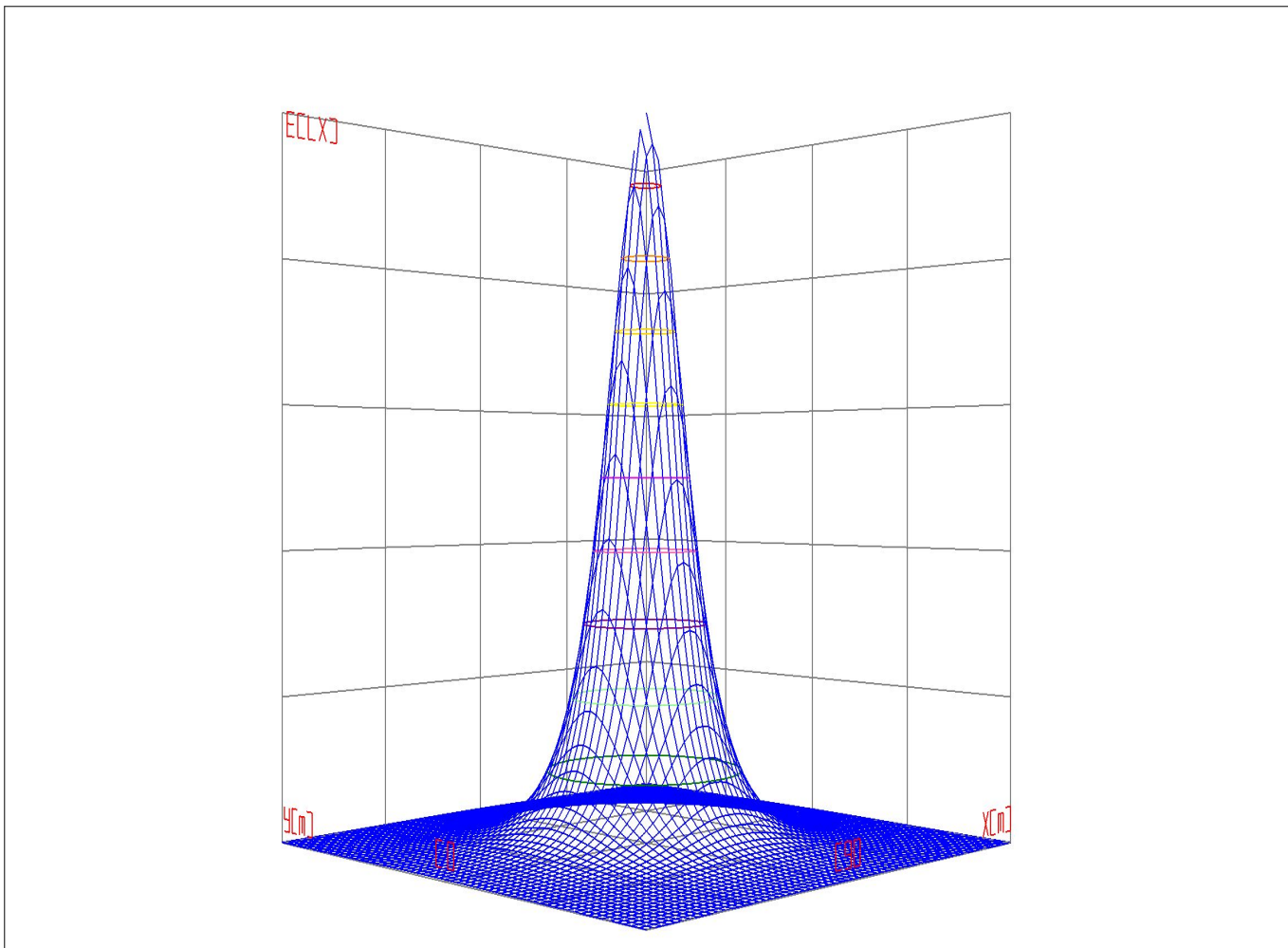


Working Plane Luminaire Mounting Height(m): 3.00
 Working Plane Maximum Illuminance(lx): 103.55
 Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11

3D Plane Illuminance Modal

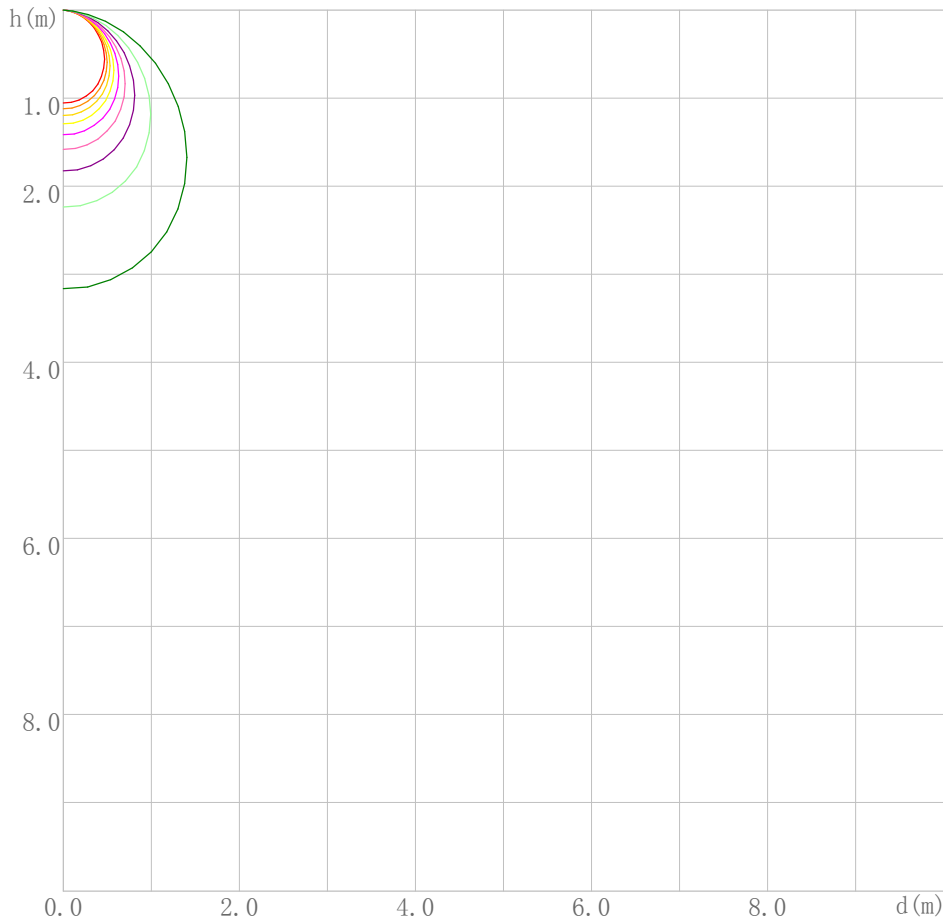


Curves: 3D Model — 90% — 80% — 70% — 60% — 50% — 40% — 30% — 20% — 10% —
View Angles(deg): 0 Height(m): 3.0 Distance(m): 10.0

Space ISO Illuminance Diagram

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11

Space ISO Illuminance Curve

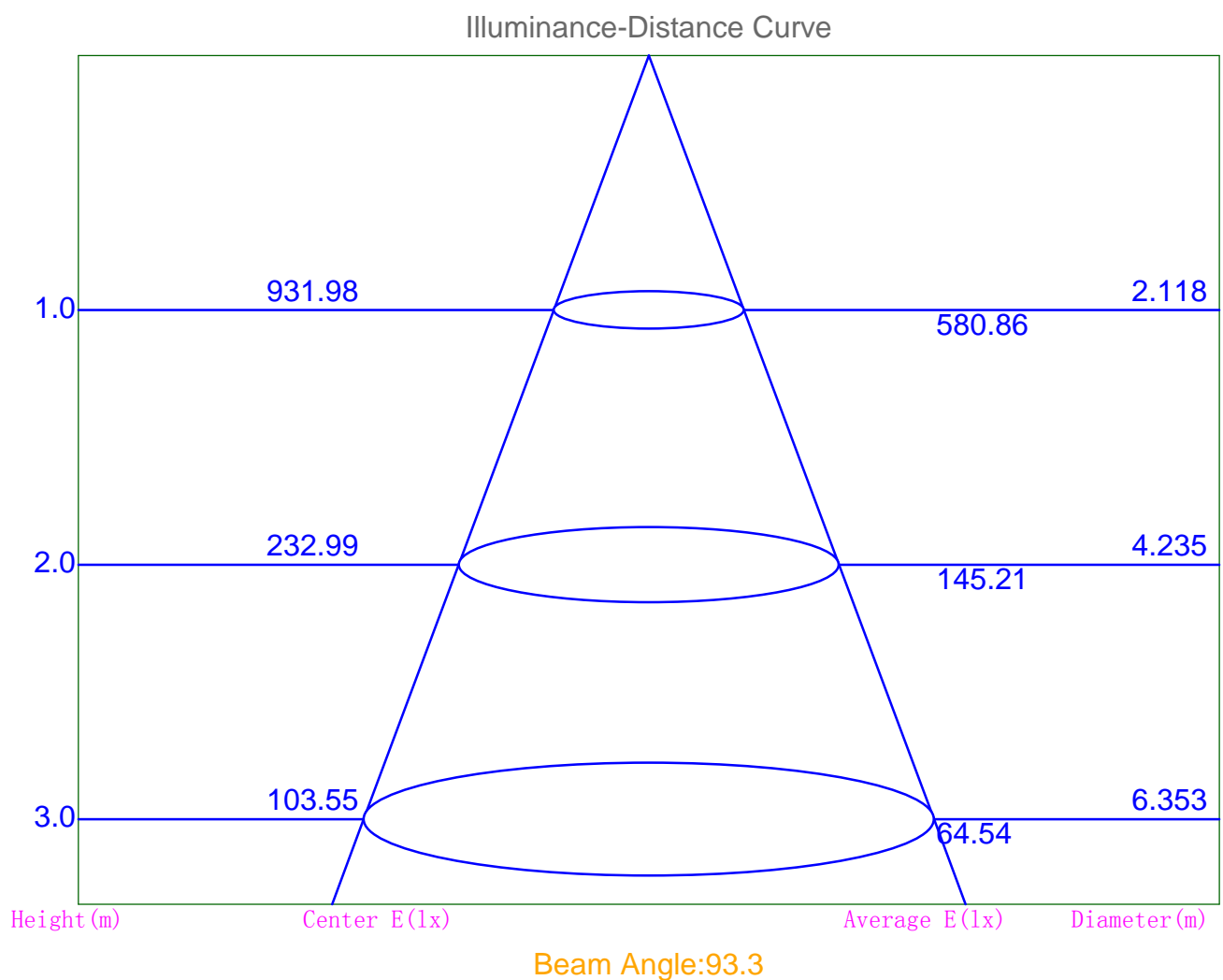


- Curves:
unit:lx
[EMax] =931.977
- [EMax*90%]=838.779
 - [EMax*80%]=745.582
 - [EMax*70%]=652.384
 - [EMax*60%]=559.186
 - [EMax*50%]=465.988
 - [EMax*40%]=372.791
 - [EMax*30%]=279.593
 - [EMax*20%]=186.395
 - [EMax*10%]=93.198

Space Plane Maximum Illuminance and @Angle:931.98,0.0deg
Plane Maximum Lighting Intensity and @Angle:931.977cd,0deg

Illuminance-Distance Diagram

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11



Indoor Luminance Limiting Curves

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11

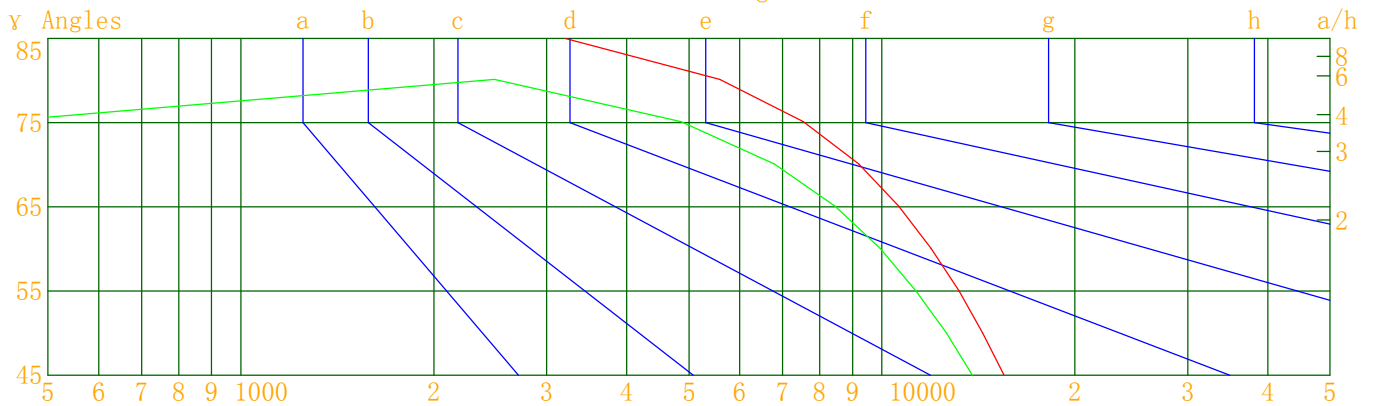
Glare Grade Table

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	15511	14361	13182	11933	10629	9202	7543	5585	3205
C90	13848	12608	11298	9937	8449	6792	4859	2486	443

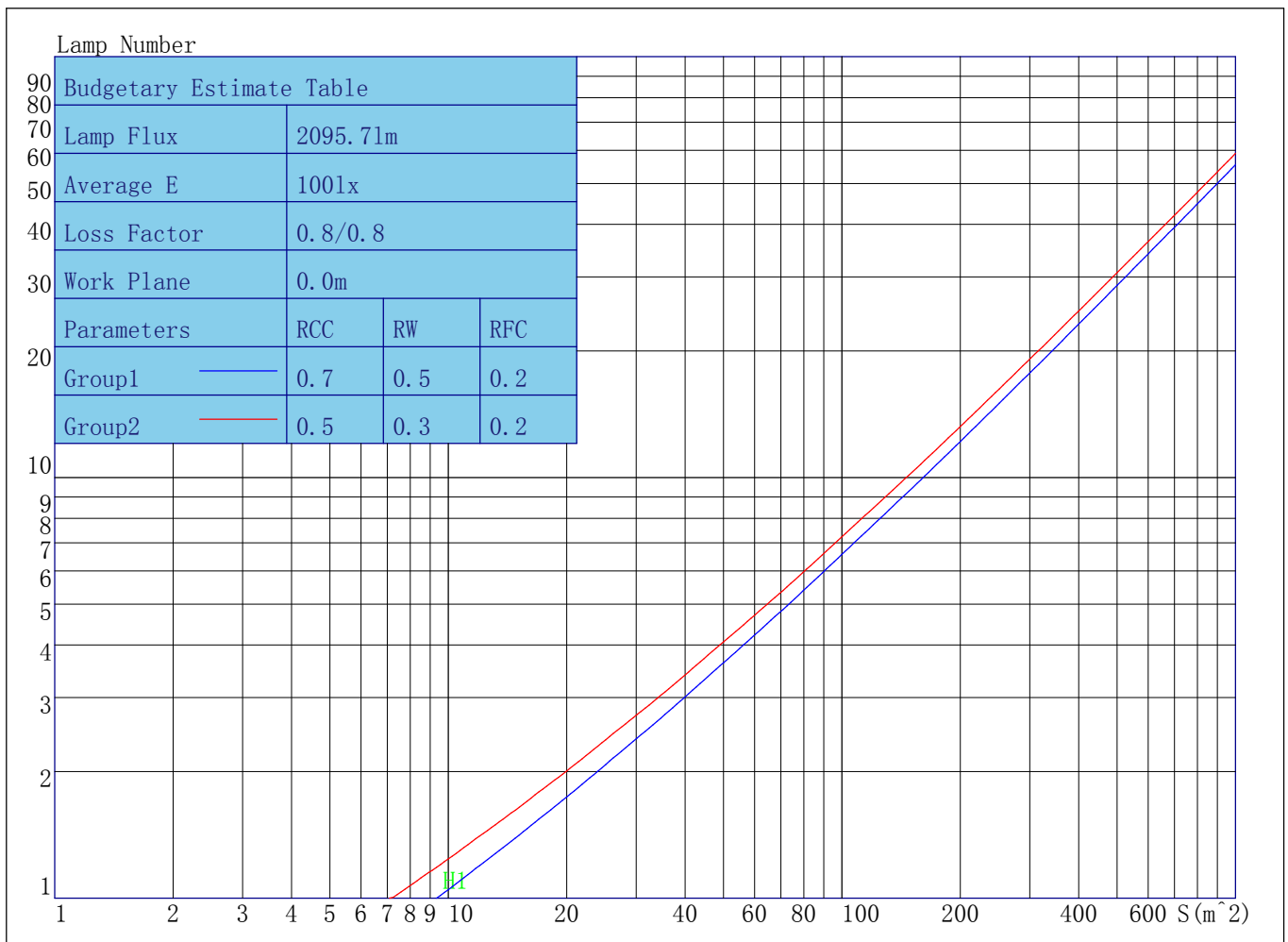
Luminance Limiting Curve



Luminous Size: Length(m)=0.190 Width(m)=0.190 Height(m)=0.050 Area(m^2)=0.045600
 Luminous Type: Without Luminous Side
 Luminous Curves: C0-C180 Color: — C90-C270 Color: —

Indoor Budgetary Estimate Table

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
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Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11



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

Indoor Coefficient of Utilization Table

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11

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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	101	101	101	99
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	91	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73
3	93	83	75	69	90	81	74	69	78	72	68	76	71	66	73	69	65	63
4	85	74	66	60	83	73	65	59	70	64	58	68	62	58	66	61	57	55
5	79	67	58	52	77	66	58	52	63	57	51	61	55	51	60	54	50	48
6	73	60	52	46	71	60	52	46	58	51	45	56	50	45	54	49	44	42
7	68	55	47	41	66	54	46	41	53	46	40	51	45	40	50	44	40	38
8	63	51	42	37	62	50	42	37	48	41	36	47	41	36	46	40	36	34
9	59	47	39	33	58	46	38	33	45	38	33	44	37	33	43	37	33	31
10	56	43	35	30	54	43	35	30	42	35	30	41	34	30	40	34	30	28

IES Indoor Report

Photometric Filename:ICDLR20W4K-WH.IES

Unified Glare Rating Table

Lum. Name: ICDLR20W4K-WH	Lum. Catalog: LED DOWNLIGHT	Test ID:
Lamp Name: 4000K	Lamp Catalog: SMD2835	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2019/06/11

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	Vewed crosswise					Vewed endwise					
X=2H	Y=2H	29.0	32.3	29.7	33.0	33.6	28.1	31.4	28.8	32.1	32.7
	Y=3H	32.2	35.5	32.9	36.2	36.8	30.7	34.0	31.4	34.7	35.3
	Y=4H	34.2	37.0	34.9	37.7	38.3	32.3	35.1	33.1	35.8	36.4
	Y=6H	35.0	37.8	35.8	38.4	39.1	32.7	35.5	33.5	36.1	36.8
	Y=8H	35.2	38.0	36.0	38.6	39.2	32.8	35.5	33.5	36.1	36.8
	Y=12H	35.3	38.0	36.1	38.7	39.3	32.7	35.4	33.5	36.1	36.7
X=4H	Y=2H	29.9	32.7	30.7	33.4	34.0	29.3	32.1	30.0	32.8	33.4
	Y=3H	33.3	36.1	34.1	36.8	37.4	32.1	34.9	32.9	35.6	36.2
	Y=4H	33.8	35.3	34.8	36.2	37.0	32.2	33.7	33.2	34.6	35.5
	Y=6H	34.9	36.3	35.9	37.2	38.0	32.9	34.3	33.9	35.2	36.0
	Y=8H	35.3	36.6	36.2	37.5	38.3	33.0	34.3	34.0	35.2	36.0
	Y=12H	34.5	35.6	35.6	36.6	37.5	32.1	33.2	33.2	34.2	35.1
X=8H	Y=4H	33.9	35.2	34.9	36.1	37.0	32.4	33.8	33.4	34.6	35.5
	Y=6H	34.3	35.2	35.4	36.2	37.1	32.4	33.3	33.4	34.3	35.2
	Y=8H	34.2	34.9	35.4	36.0	37.0	32.0	32.7	33.2	33.8	34.8
	Y=12H	34.4	35.1	35.6	36.2	37.1	32.1	32.7	33.2	33.8	34.8
X=12H	Y=4H	33.0	34.1	34.1	35.1	36.0	31.5	32.6	32.6	33.6	34.5
	Y=6H	33.8	34.5	34.9	35.6	36.6	31.9	32.6	33.0	33.7	34.6
	Y=8H	34.2	34.8	35.3	35.9	36.9	32.0	32.7	33.2	33.8	34.8
Variations with the objver position at spacings											
	S=1.0H	3.1/-1.4					3.2/-0.6				
	S=1.5H	-1.4/-21.5					-0.5/-19.9				
	S=2.0H	-1.4/-21.5					-0.5/-19.9				

IES Indoor Report
Photometric Filename:ICDLR20W4K-WH.IES

Candela Tabulation

V/H	C0.0	C90.0	C180.0	C270.0
Y 0.0	931.98	931.98	931.98	931.98
Y 5.0	930.45	913.91	927.69	924.88
Y 10.0	913.18	889.35	909.29	913.33
Y 15.0	885.03	854.63	878.00	889.91
Y 20.0	845.29	808.70	836.44	855.32
Y 25.0	794.38	750.39	783.20	809.71
Y 30.0	730.04	680.84	716.73	750.31
Y 35.0	657.34	605.13	642.55	681.40
Y 40.0	580.02	526.53	563.98	606.37
Y 45.0	500.14	446.52	483.63	528.09
Y 50.0	420.95	369.54	404.47	448.93
Y 55.0	344.77	295.51	328.58	372.01
Y 60.0	272.06	226.55	257.11	298.77
Y 65.0	204.84	162.83	190.75	230.19
Y 70.0	143.52	105.93	130.31	167.05
Y 75.0	89.02	57.35	77.32	110.14
Y 80.0	44.22	19.68	34.29	61.35
Y 85.0	12.74	1.76	7.24	22.81
Y 90.0	0.00	0.00	0.00	4.24
Y 95.0	0.00	0.00	0.00	0.00
Y 100.0	0.00	0.00	0.00	0.00
Y 105.0	0.03	0.00	0.00	0.00
Y 110.0	0.60	0.00	0.00	0.45
Y 115.0	1.14	0.54	0.56	0.91
Y 120.0	1.70	1.30	1.31	1.50
Y 125.0	2.38	1.95	1.98	2.04
Y 130.0	2.92	2.59	2.74	2.63
Y 135.0	3.59	3.31	3.37	3.31
Y 140.0	4.17	3.88	4.07	3.83
Y 145.0	4.73	4.56	4.72	4.41
Y 150.0	5.34	5.08	5.26	4.98
Y 155.0	5.83	5.62	5.88	5.47
Y 160.0	6.39	6.19	6.39	6.07
Y 165.0	6.84	6.58	6.93	6.53
Y 170.0	7.25	7.04	7.36	7.07
Y 175.0	7.50	7.38	7.64	7.44
Y 180.0	7.66	7.66	7.66	7.66
