

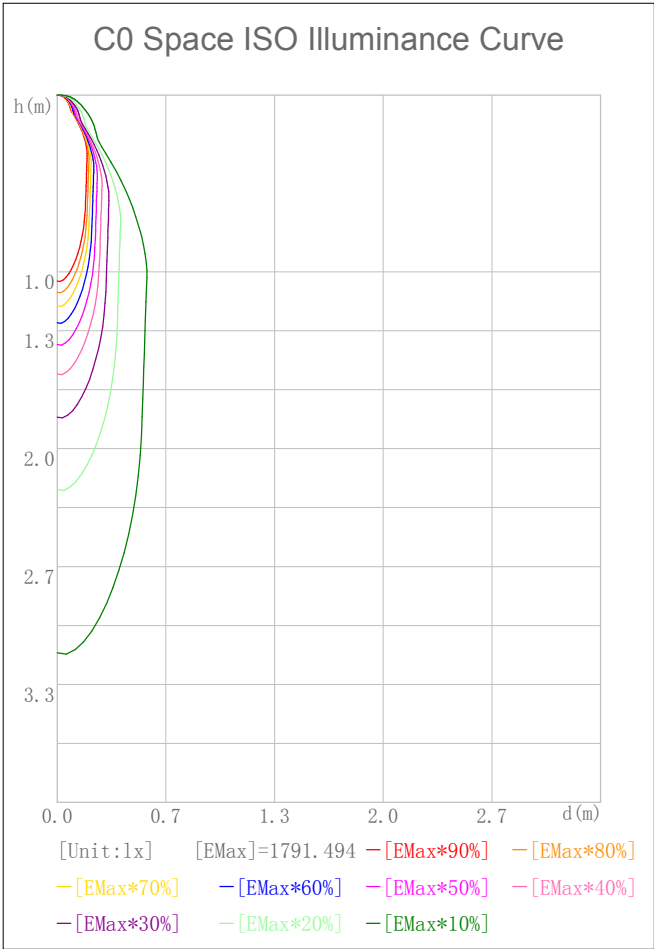
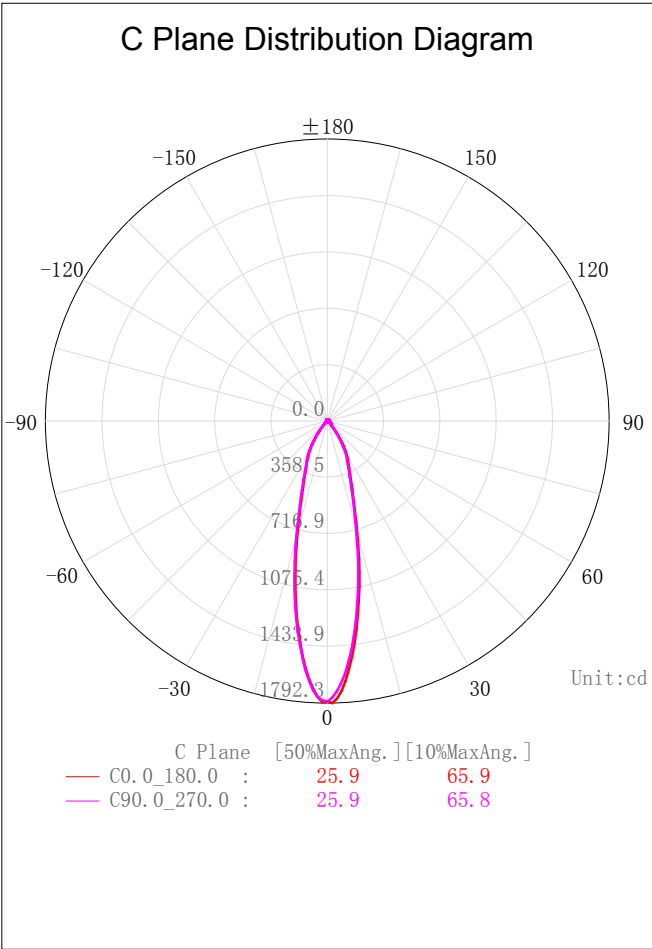
Indoor Luminaire Photometric Data

Description Information

Luminary Name: UL-9W-COB		Lum. Catalog:	Test ID:
Lamp Name:		Lamp Catalog:	Test Date: 2016/12/02
Manufacture:		Shld. Ang(° ):	Test Machine:GON-2000
Test Lab:		Frequency(Hz):	Lamp CCT(K): Ra:
Lum. Size (W*L*H):0.000m*0.000m*0.100m		Lum. Area (m2):0.000	Lum. W(kg): 1.000
Test System: C, γ	Test Step: C=30.0 γ=1.0	Temp. (°C): 25	Humidity(%):

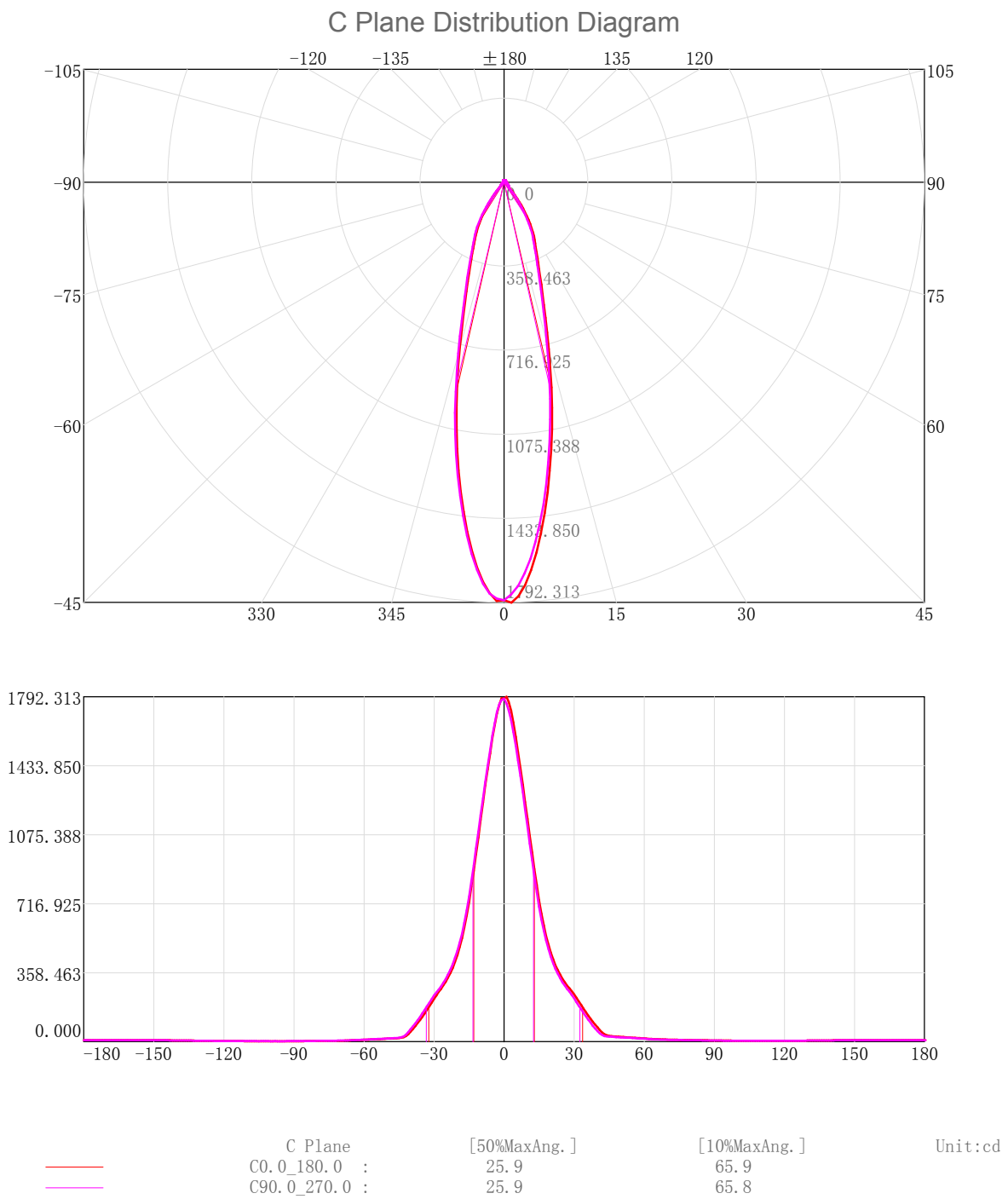
Character Parameter

Lamp Speciality Parameter		Luminaire Speciality Parameter	
Rated Flux(lm): 675.070	Luminary Flux(lm): 675.071	Field Angle(10%Imax): 65.9(° )	
Rated Power(W):	Luminary Efficiency: 100.00%	Down Lumens&Percent: 637.822lm 94.48%	
Rated Voltage(V):	Luminary EER(lm/W): 89.556	Up Lumens&Percent: 37.248lm 5.52%	
Tested Power(W): 7.538	Max. Candela(cd): 1792.313	S/MH: C0_a180=0.435 C90_270=0.433	
Lamps' Inside: 1	Max Cand@Ang. (° ): C=0.0 γ=1.0	CIE Type: Semi-Direct	
Tested Electrics(V, A, pf):23.9, 0.315	Beam Angle(50%Imax): 25.9(° )	ErP Φuse(90° ): 586.166lm	
Lamp Size (W*L*H):0.000m*0.000m*0.100m	Left=-12.9° , Right=13.0°	IRF(%): 604.328	



2D Plane Light Intensity Distribution Curve

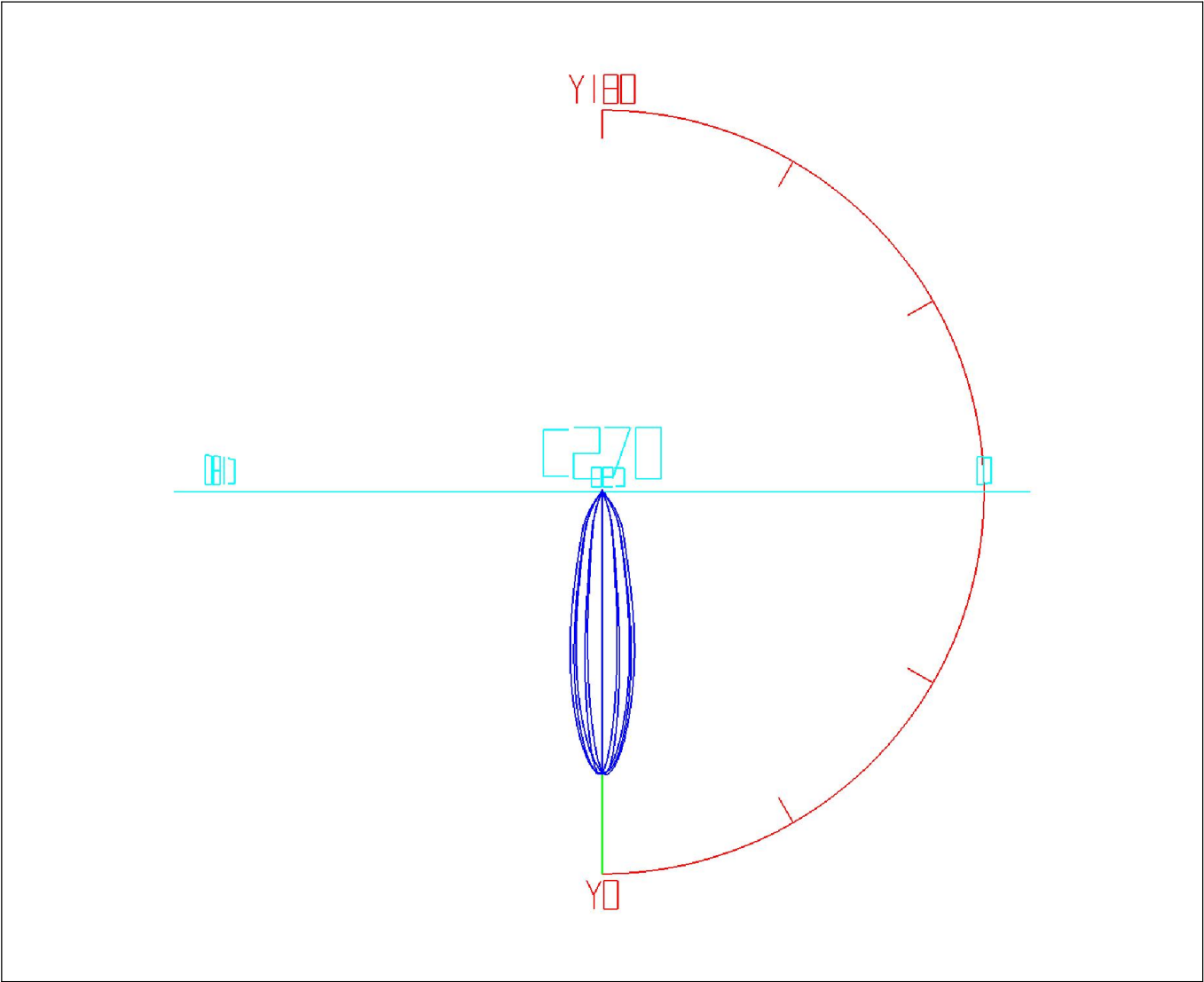
Lum. Name:UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02



3D Light Intensity Distribution Modal

Lum. Name:     UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02

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:UL-9W-COB.IES

Zonal Flux Tabulation

Zone ( γ )	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp	Zone ( γ )	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
0.0-1.0	1.70	1.70	0.25	0.25	47.0-48.0	1.80	593.44	0.27	87.91
1.0-2.0	5.04	6.74	0.75	1.00	48.0-49.0	1.76	595.19	0.26	88.17
2.0-3.0	8.22	14.95	1.22	2.21	49.0-50.0	1.72	596.92	0.26	88.42
3.0-4.0	11.15	26.10	1.65	3.87	50.0-51.0	1.70	598.61	0.25	88.67
4.0-5.0	13.77	39.87	2.04	5.91	51.0-52.0	1.67	600.28	0.25	88.92
5.0-6.0	16.06	55.93	2.38	8.29	52.0-53.0	1.64	601.92	0.24	89.16
6.0-7.0	17.99	73.92	2.66	10.95	53.0-54.0	1.61	603.53	0.24	89.40
7.0-8.0	19.55	93.47	2.90	13.85	54.0-55.0	1.57	605.10	0.23	89.64
8.0-9.0	20.74	114.21	3.07	16.92	55.0-56.0	1.54	606.65	0.23	89.86
9.0-10.0	21.57	135.78	3.20	20.11	56.0-57.0	1.50	608.15	0.22	90.09
10.0-11.0	22.05	157.83	3.27	23.38	57.0-58.0	1.45	609.60	0.21	90.30
11.0-12.0	22.19	180.02	3.29	26.67	58.0-59.0	1.39	610.99	0.21	90.51
12.0-13.0	22.04	202.07	3.27	29.93	59.0-60.0	1.35	612.34	0.20	90.71
13.0-14.0	21.63	223.70	3.20	33.14	60.0-61.0	1.30	613.64	0.19	90.90
14.0-15.0	21.02	244.71	3.11	36.25	61.0-62.0	1.25	614.89	0.19	91.09
15.0-16.0	20.27	264.98	3.00	39.25	62.0-63.0	1.19	616.08	0.18	91.26
16.0-17.0	19.49	284.47	2.89	42.14	63.0-64.0	1.14	617.22	0.17	91.43
17.0-18.0	18.74	303.21	2.78	44.91	64.0-65.0	1.09	618.32	0.16	91.59
18.0-19.0	18.05	321.25	2.67	47.59	65.0-66.0	1.05	619.37	0.16	91.75
19.0-20.0	17.41	338.67	2.58	50.17	66.0-67.0	1.01	620.37	0.15	91.90
20.0-21.0	16.81	355.48	2.49	52.66	67.0-68.0	0.97	621.35	0.14	92.04
21.0-22.0	16.26	371.74	2.41	55.07	68.0-69.0	0.95	622.30	0.14	92.18
22.0-23.0	15.77	387.52	2.34	57.40	69.0-70.0	0.92	623.22	0.14	92.32
23.0-24.0	15.33	402.85	2.27	59.68	70.0-71.0	0.90	624.12	0.13	92.45
24.0-25.0	14.91	417.75	2.21	61.88	71.0-72.0	0.88	625.00	0.13	92.58
25.0-26.0	14.51	432.27	2.15	64.03	72.0-73.0	0.85	625.85	0.13	92.71
26.0-27.0	14.17	446.44	2.10	66.13	73.0-74.0	0.84	626.69	0.12	92.83
27.0-28.0	13.84	460.28	2.05	68.18	74.0-75.0	0.82	627.51	0.12	92.96
28.0-29.0	13.46	473.75	1.99	70.18	75.0-76.0	0.80	628.32	0.12	93.07
29.0-30.0	13.01	486.76	1.93	72.11	76.0-77.0	0.79	629.10	0.12	93.19
30.0-31.0	12.46	499.22	1.85	73.95	77.0-78.0	0.77	629.87	0.11	93.30
31.0-32.0	11.78	511.00	1.75	75.70	78.0-79.0	0.75	630.62	0.11	93.42
32.0-33.0	11.01	522.01	1.63	77.33	79.0-80.0	0.74	631.36	0.11	93.53
33.0-34.0	10.18	532.19	1.51	78.83	80.0-81.0	0.72	632.08	0.11	93.63
34.0-35.0	9.29	541.48	1.38	80.21	81.0-82.0	0.70	632.79	0.10	93.74
35.0-36.0	8.38	549.85	1.24	81.45	82.0-83.0	0.69	633.47	0.10	93.84
36.0-37.0	7.45	557.30	1.10	82.55	83.0-84.0	0.67	634.14	0.10	93.94
37.0-38.0	6.51	563.81	0.96	83.52	84.0-85.0	0.65	634.79	0.10	94.03
38.0-39.0	5.58	569.40	0.83	84.35	85.0-86.0	0.64	635.43	0.09	94.13
39.0-40.0	4.70	574.09	0.70	85.04	86.0-87.0	0.62	636.05	0.09	94.22
40.0-41.0	3.87	577.97	0.57	85.62	87.0-88.0	0.60	636.65	0.09	94.31
41.0-42.0	3.15	581.12	0.47	86.08	88.0-89.0	0.59	637.24	0.09	94.40
42.0-43.0	2.59	583.70	0.38	86.47	89.0-90.0	0.58	637.82	0.09	94.48
43.0-44.0	2.21	585.91	0.33	86.79	90.0-91.0	0.57	638.39	0.08	94.57
44.0-45.0	1.99	587.90	0.30	87.09	91.0-92.0	0.56	638.95	0.08	94.65
45.0-46.0	1.89	589.80	0.28	87.37	92.0-93.0	0.55	639.50	0.08	94.73
46.0-47.0	1.84	591.64	0.27	87.64	93.0-94.0	0.54	640.05	0.08	94.81

IES Indoor Report

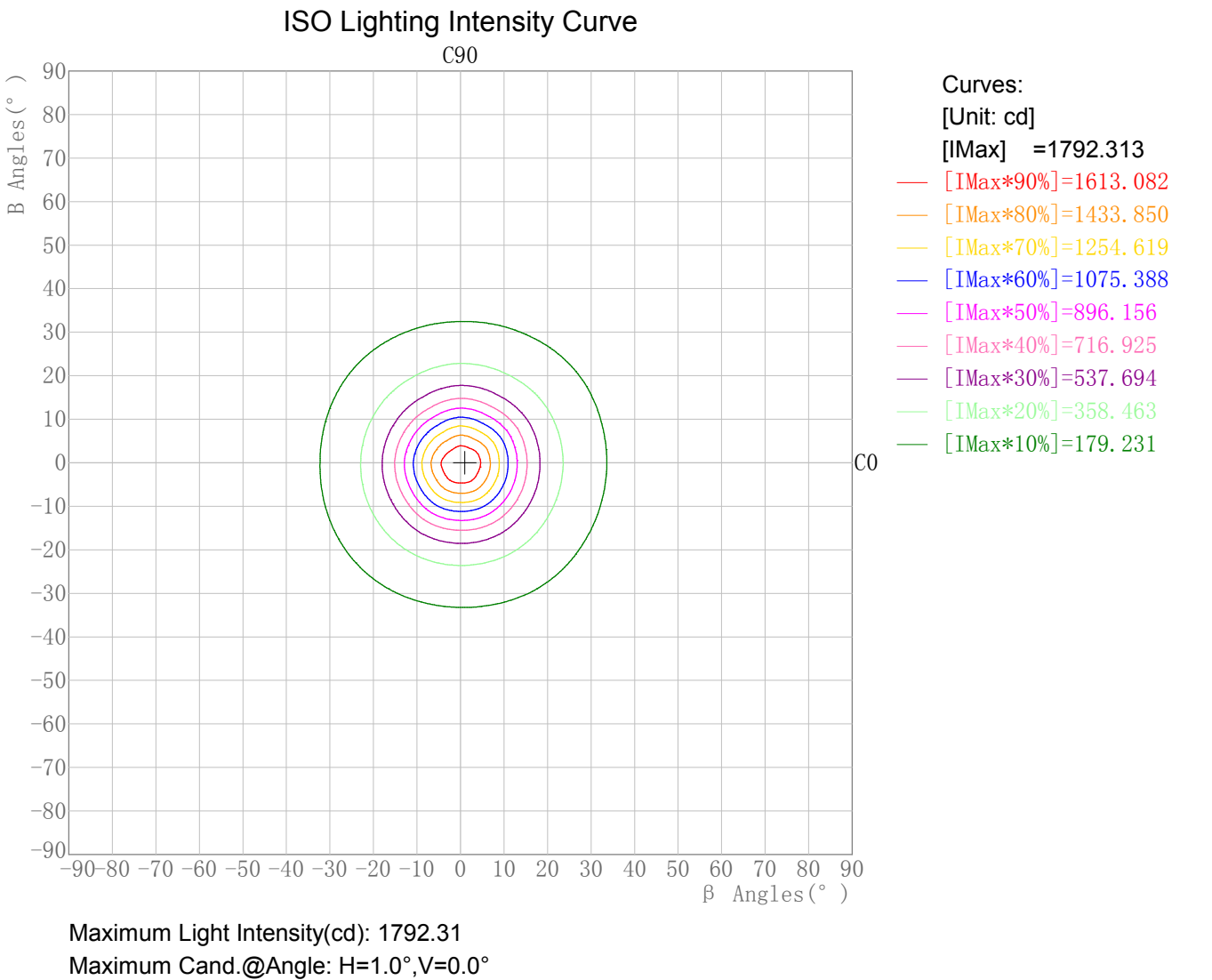
Photometric Filename:UL-9W-COB.IES

Zonal Flux Tabulation - (Cont.)

Zone ( γ )	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp	Zone ( γ )	Zone Flux (lm)	Sums Flux (lm)	Zone%Lamp	Sums%Lamp
94.0-95.0	0.54	640.59	0.08	94.89	141.0-142.0	0.52	663.81	0.08	98.33
95.0-96.0	0.53	641.12	0.08	94.97	142.0-143.0	0.52	664.33	0.08	98.41
96.0-97.0	0.52	641.64	0.08	95.05	143.0-144.0	0.52	664.85	0.08	98.49
97.0-98.0	0.51	642.15	0.08	95.12	144.0-145.0	0.51	665.36	0.08	98.56
98.0-99.0	0.51	642.66	0.08	95.20	145.0-146.0	0.50	665.87	0.07	98.64
99.0-100.0	0.50	643.16	0.07	95.27	146.0-147.0	0.50	666.36	0.07	98.71
100.0-101.0	0.50	643.66	0.07	95.35	147.0-148.0	0.49	666.85	0.07	98.78
101.0-102.0	0.49	644.16	0.07	95.42	148.0-149.0	0.48	667.33	0.07	98.85
102.0-103.0	0.49	644.64	0.07	95.49	149.0-150.0	0.47	667.80	0.07	98.92
103.0-104.0	0.48	645.12	0.07	95.56	150.0-151.0	0.46	668.25	0.07	98.99
104.0-105.0	0.48	645.60	0.07	95.63	151.0-152.0	0.45	668.70	0.07	99.06
105.0-106.0	0.47	646.08	0.07	95.71	152.0-153.0	0.43	669.13	0.06	99.12
106.0-107.0	0.47	646.55	0.07	95.78	153.0-154.0	0.42	669.55	0.06	99.18
107.0-108.0	0.47	647.02	0.07	95.84	154.0-155.0	0.41	669.96	0.06	99.24
108.0-109.0	0.47	647.49	0.07	95.91	155.0-156.0	0.39	670.36	0.06	99.30
109.0-110.0	0.47	647.95	0.07	95.98	156.0-157.0	0.38	670.74	0.06	99.36
110.0-111.0	0.47	648.42	0.07	96.05	157.0-158.0	0.37	671.10	0.05	99.41
111.0-112.0	0.47	648.88	0.07	96.12	158.0-159.0	0.35	671.45	0.05	99.46
112.0-113.0	0.46	649.35	0.07	96.19	159.0-160.0	0.33	671.79	0.05	99.51
113.0-114.0	0.46	649.81	0.07	96.26	160.0-161.0	0.32	672.11	0.05	99.56
114.0-115.0	0.46	650.27	0.07	96.33	161.0-162.0	0.30	672.41	0.05	99.61
115.0-116.0	0.47	650.74	0.07	96.40	162.0-163.0	0.29	672.70	0.04	99.65
116.0-117.0	0.47	651.20	0.07	96.46	163.0-164.0	0.27	672.97	0.04	99.69
117.0-118.0	0.47	651.67	0.07	96.53	164.0-165.0	0.26	673.23	0.04	99.73
118.0-119.0	0.47	652.14	0.07	96.60	165.0-166.0	0.24	673.47	0.04	99.76
119.0-120.0	0.47	652.61	0.07	96.67	166.0-167.0	0.22	673.69	0.03	99.80
120.0-121.0	0.47	653.09	0.07	96.74	167.0-168.0	0.21	673.90	0.03	99.83
121.0-122.0	0.48	653.56	0.07	96.81	168.0-169.0	0.19	674.09	0.03	99.85
122.0-123.0	0.48	654.04	0.07	96.89	169.0-170.0	0.17	674.26	0.03	99.88
123.0-124.0	0.48	654.53	0.07	96.96	170.0-171.0	0.16	674.41	0.02	99.90
124.0-125.0	0.49	655.02	0.07	97.03	171.0-172.0	0.14	674.55	0.02	99.92
125.0-126.0	0.49	655.51	0.07	97.10	172.0-173.0	0.12	674.67	0.02	99.94
126.0-127.0	0.49	656.00	0.07	97.18	173.0-174.0	0.11	674.78	0.02	99.96
127.0-128.0	0.50	656.50	0.07	97.25	174.0-175.0	0.09	674.87	0.01	99.97
128.0-129.0	0.50	657.00	0.07	97.32	175.0-176.0	0.07	674.94	0.01	99.98
129.0-130.0	0.51	657.51	0.08	97.40	176.0-177.0	0.06	675.00	0.01	99.99
130.0-131.0	0.51	658.02	0.08	97.47	177.0-178.0	0.04	675.04	0.01	100.00
131.0-132.0	0.52	658.54	0.08	97.55	178.0-179.0	0.02	675.06	0.00	100.00
132.0-133.0	0.52	659.06	0.08	97.63	179.0-180.0	0.01	675.07	0.00	100.00
133.0-134.0	0.52	659.58	0.08	97.71					
134.0-135.0	0.53	660.11	0.08	97.78					
135.0-136.0	0.53	660.64	0.08	97.86					
136.0-137.0	0.53	661.17	0.08	97.94					
137.0-138.0	0.53	661.70	0.08	98.02					
138.0-139.0	0.53	662.23	0.08	98.10					
139.0-140.0	0.53	662.76	0.08	98.18					
140.0-141.0	0.53	663.29	0.08	98.25					

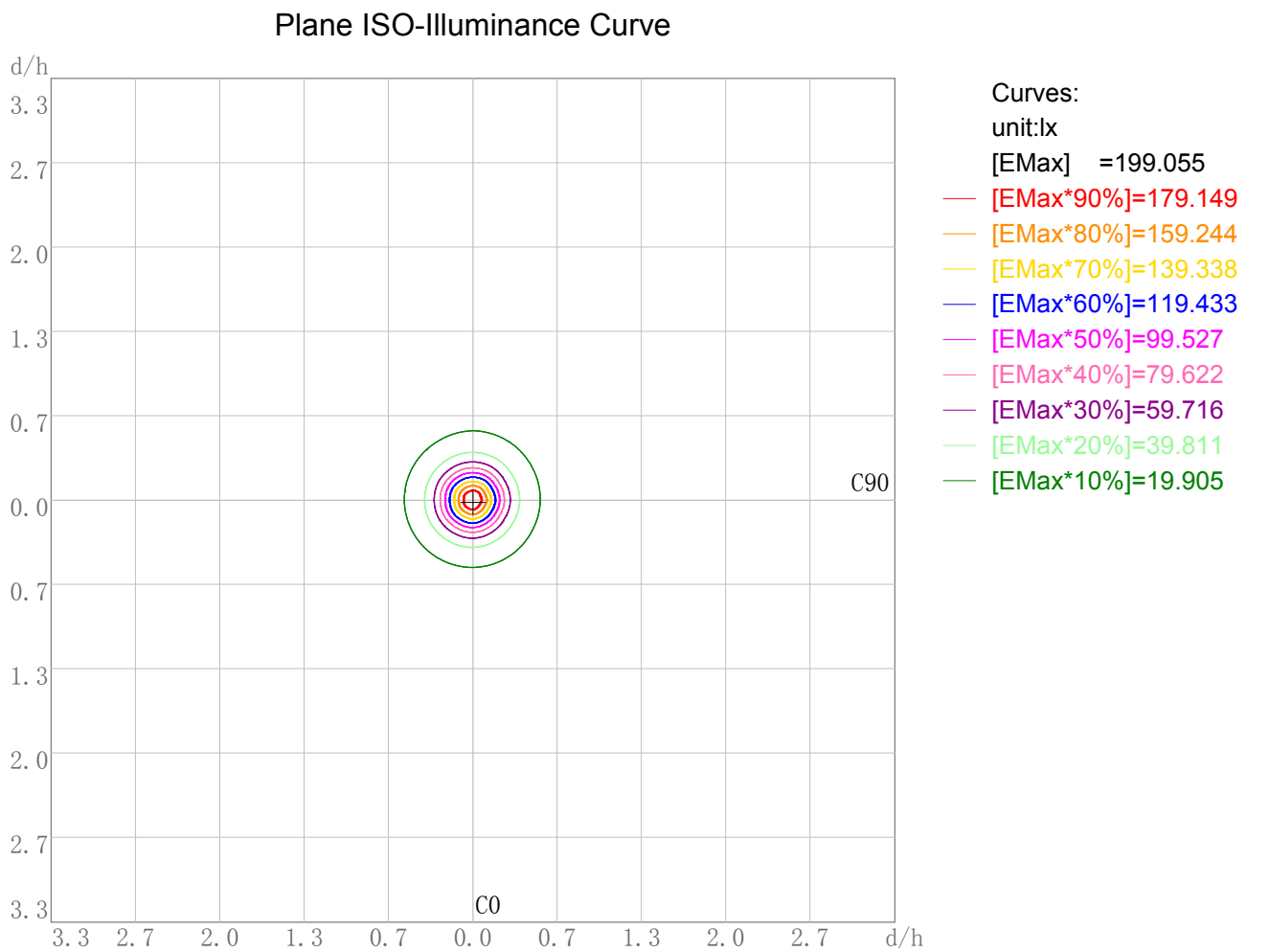
Rectangle ISO Lighting Intensity Diagram

Lum. Name:     UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02



Plane ISO-Illuminance Diagram

Lum. Name:UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02

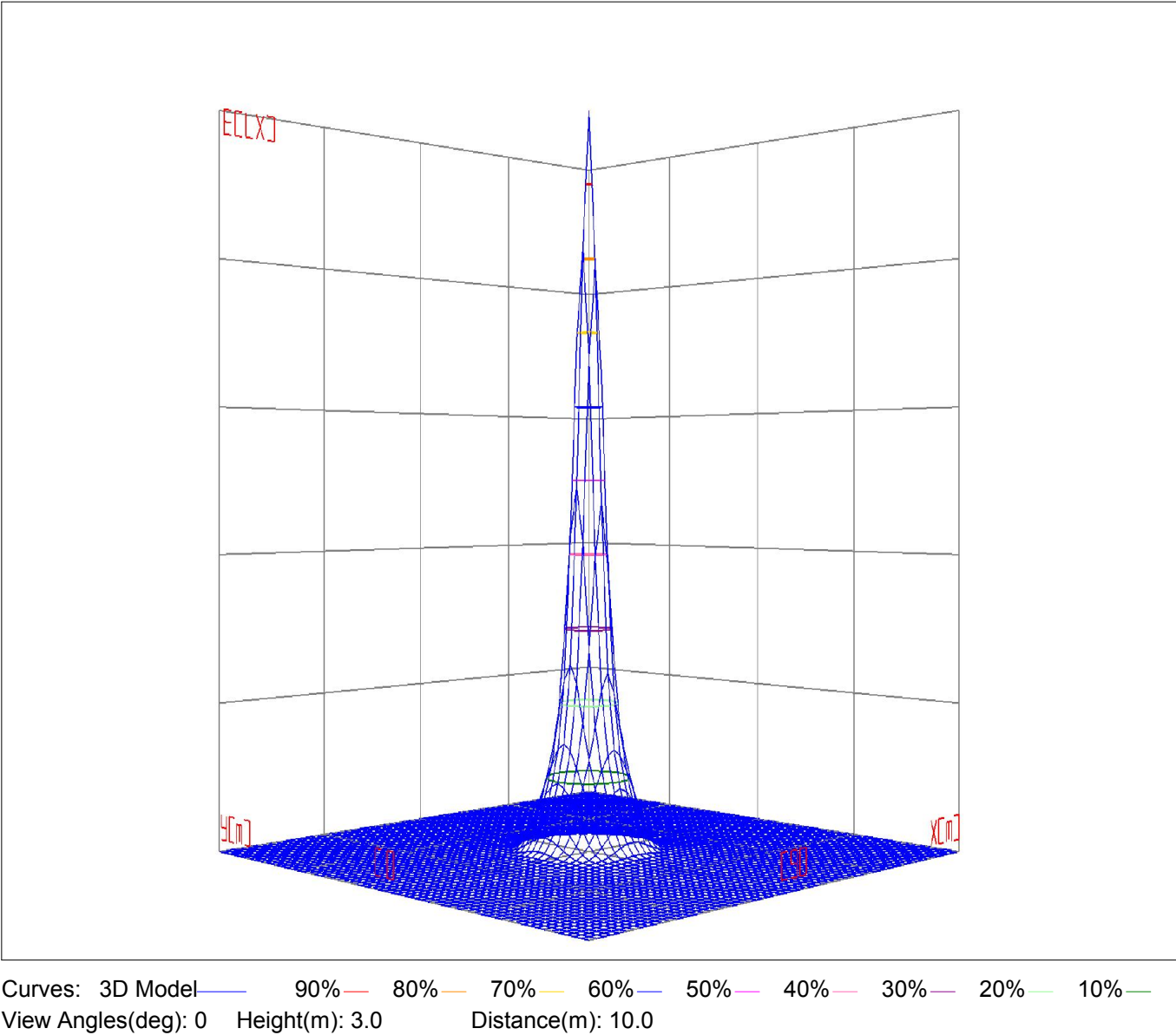


Working Plane Luminaire Mounting Height(m): 3.00  
Working Plane Maximum Illuminance(lx): 199.05  
Working Plane Maximum Illuminance Position(d/h):H0.0 V0.0

3D Plane ISO Illuminance Diagram

Lum. Name:UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02

3D Plane Illuminance Modal

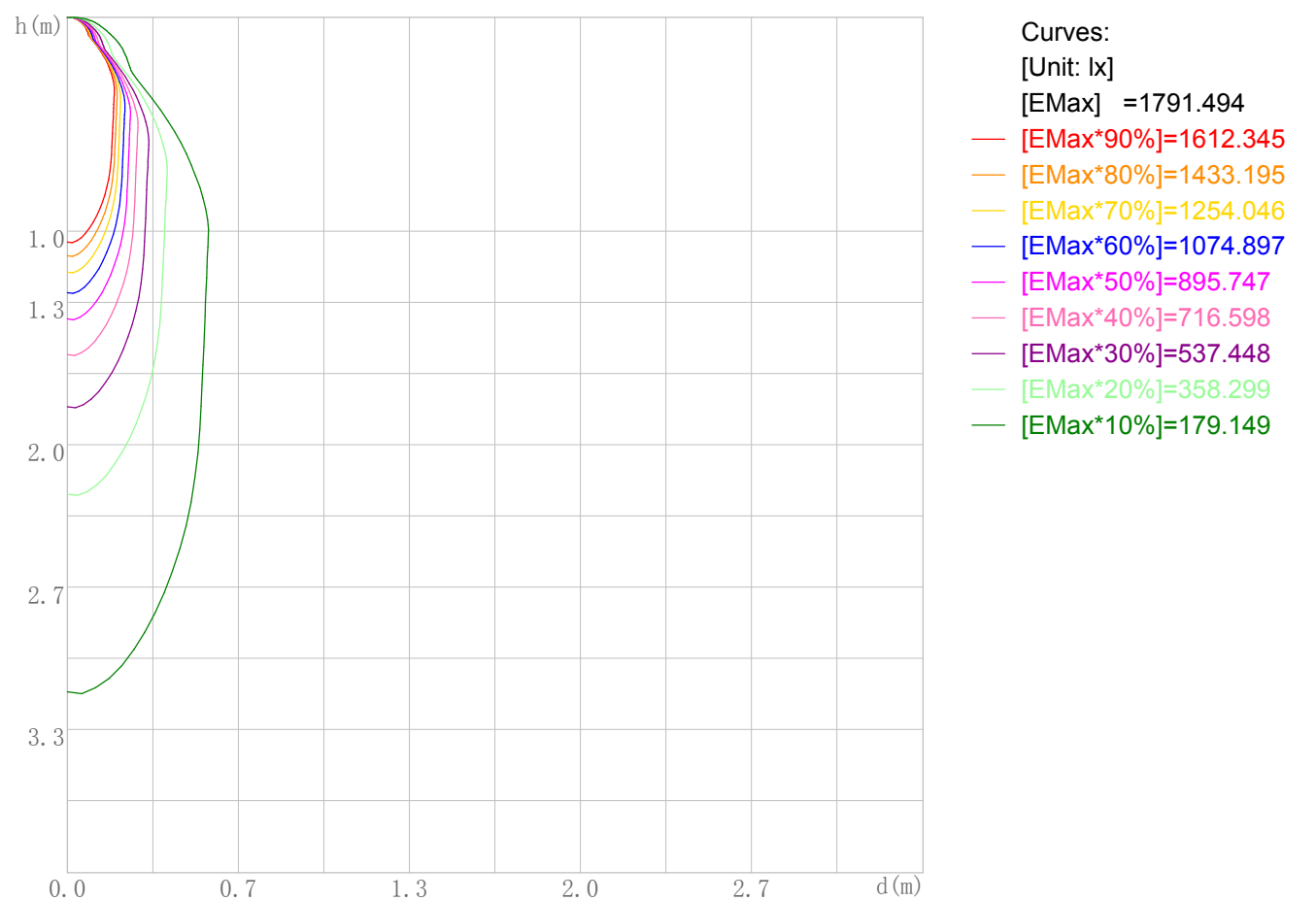




Space ISO Illuminance Diagram

Lum. Name:UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02

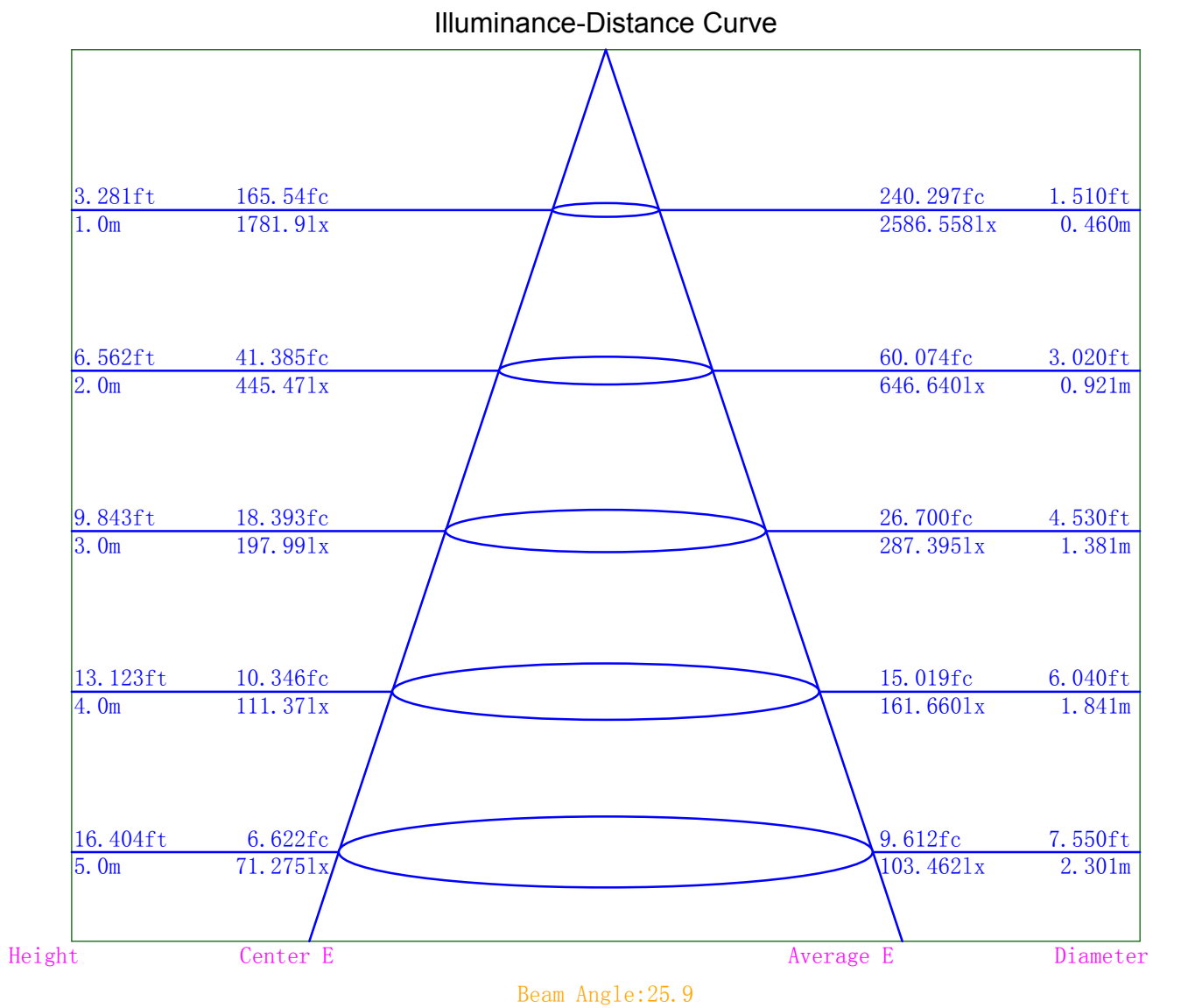
Space ISO Illuminance Curve



Space Plane Maximum Illuminance and @Angle:1791.49lx,1.0deg  
Plane Maximum Lighting Intensity and @Angle:1792.313cd,0eg

Illuminance-Distance Diagram

Lum. Name:UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02



Indoor Luminance Limiting Curves

Lum. Name:UL-9W-COB	Lum. Catalog:	Test ID:
Lamp Name:	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02

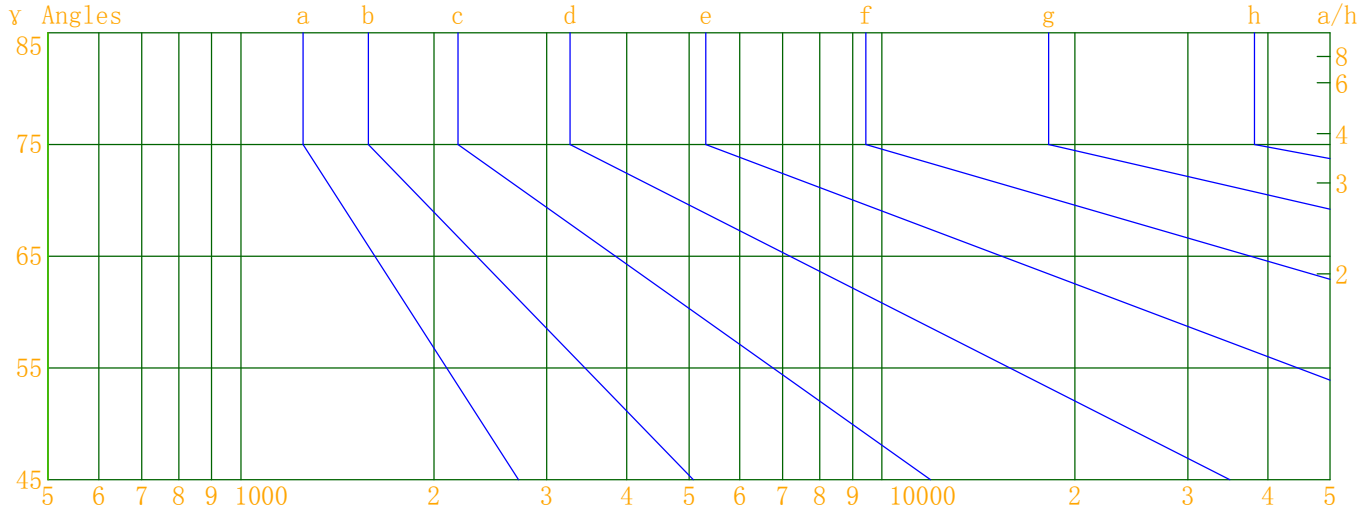
Glare Grade Table

GI	Quality	Using Illuminance							
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	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

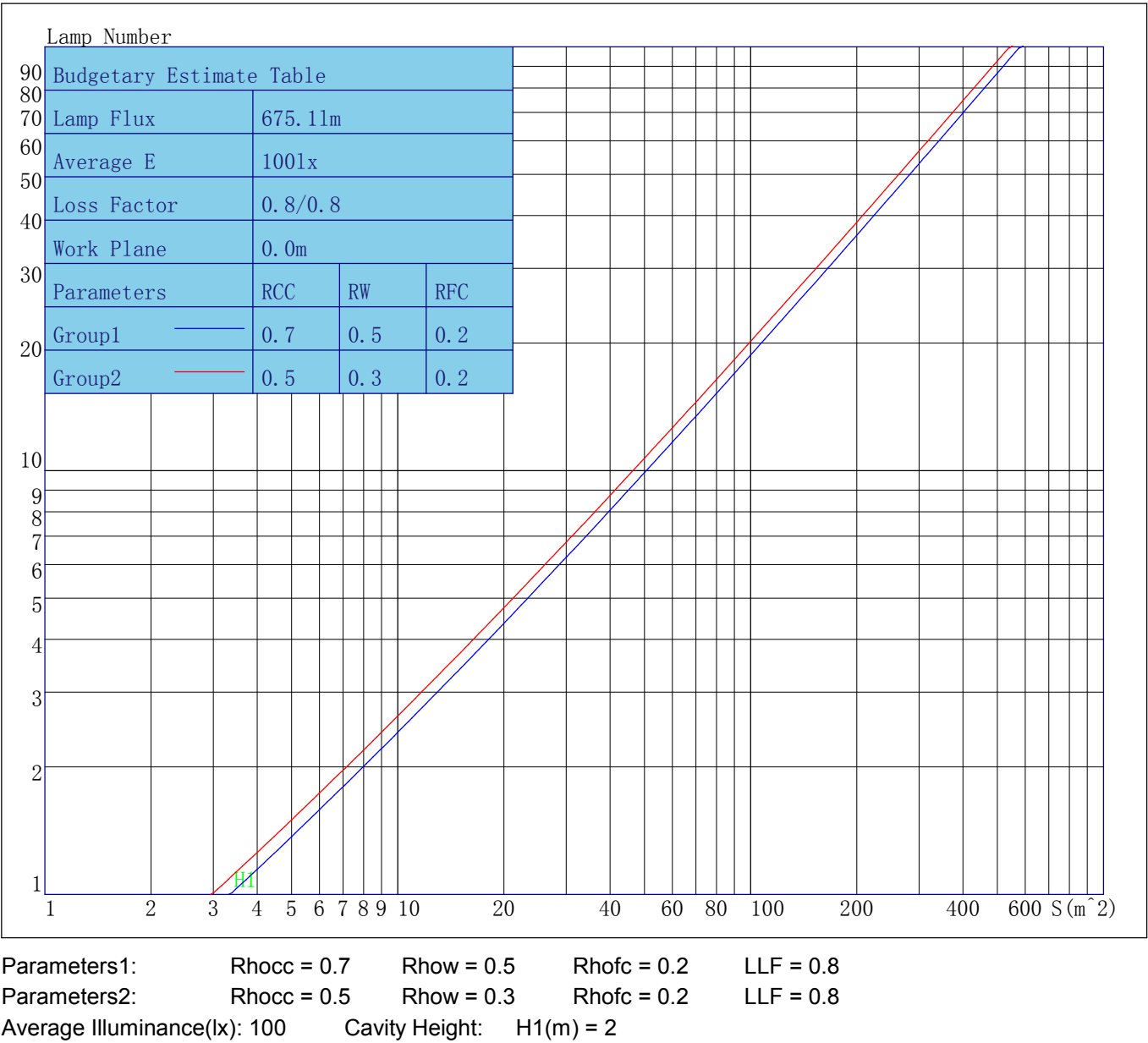
Luminance Limiting Curve



Luminous Size: Length(m)=0.000 Width(m)=0.000 Height(m)=0.100 Area(m^2)=0.000000  
Luminous Type: Without Luminous Side  
Luminous Curves: C0-C180 Color: C90-C270 Color:

Indoor Budgetary Estimate Table

Lum. Name:UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02



Indoor Coefficient of Utilization Table

Lum. Name:UL-9W-COB	Lum. Catelog:	Test ID:
Lamp Name:	Lamp Catelog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02

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	118	118	118	118	114	114	114	114	108	108	108	102	102	102	97	97	97	94
1	112	109	106	104	109	106	104	102	101	99	98	96	95	94	92	91	90	88
2	106	101	97	94	104	99	95	92	95	92	89	91	89	87	88	86	84	82
3	101	95	90	86	99	93	89	85	90	86	83	87	83	81	84	81	79	77
4	97	89	84	80	94	88	83	79	85	81	77	82	79	76	80	77	75	73
5	92	84	79	74	90	83	78	74	81	76	73	78	75	72	76	73	71	69
6	88	80	74	70	86	79	73	70	77	72	69	75	71	68	73	70	67	65
7	84	76	70	66	83	75	70	66	73	68	65	71	67	64	70	66	64	62
8	81	72	67	63	80	71	66	62	70	65	62	68	64	61	67	63	61	59
9	78	69	63	60	76	68	63	60	67	62	59	66	62	59	64	61	58	57
10	75	66	61	57	74	65	60	57	64	60	56	63	59	56	62	58	56	54

Unified Glare Rating Table

Lum. Name: UL-9W-COB	Lum. Catalog:	Test ID:
Lamp Name:	Lamp Catalog:	Test Lab:
Manufacture:	Test Machine:GON-2000	Test Date: 2016/12/02

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	-2.6	-1.6	-2.1	-1.2	-0.7	-2.6	-1.6	-2.1	-1.2	-0.7	
	Y=3H	-2.8	-1.9	-2.3	-1.5	-1.0	-2.8	-1.9	-2.3	-1.5	-1.0
	Y=4H	-2.9	-2.1	-2.4	-1.6	-1.1	-2.9	-2.1	-2.4	-1.6	-1.1
	Y=6H	-3.0	-2.3	-2.5	-1.8	-1.2	-3.0	-2.3	-2.5	-1.8	-1.2
	Y=8H	-3.0	-2.4	-2.5	-1.9	-1.3	-3.0	-2.4	-2.5	-1.9	-1.3
	Y=12H	-3.1	-2.4	-2.6	-1.9	-1.4	-3.1	-2.4	-2.6	-1.9	-1.4
X=4H    Y=2H	-2.9	-2.1	-2.4	-1.6	-1.1	-2.9	-2.1	-2.4	-1.6	-1.1	
	Y=3H	-3.1	-2.4	-2.6	-1.9	-1.4	-3.1	-2.4	-2.6	-1.9	-1.4
	Y=4H	-3.2	-2.6	-2.7	-2.1	-1.5	-3.2	-2.6	-2.7	-2.1	-1.5
	Y=6H	-3.3	-2.8	-2.8	-2.3	-1.7	-3.3	-2.8	-2.8	-2.3	-1.7
	Y=8H	-3.4	-2.9	-2.8	-2.4	-1.8	-3.4	-2.9	-2.8	-2.4	-1.8
	Y=12H	-3.5	-3.0	-2.9	-2.5	-1.8	-3.5	-3.0	-2.9	-2.5	-1.8
X=8H    Y=4H	-3.4	-2.9	-2.8	-2.4	-1.8	-3.4	-2.9	-2.8	-2.4	-1.8	
	Y=6H	-3.5	-3.1	-2.9	-2.5	-1.9	-3.5	-3.1	-2.9	-2.5	-1.9
	Y=8H	-3.6	-3.2	-3.0	-2.6	-2.0	-3.6	-3.2	-3.0	-2.6	-2.0
	Y=12H	-3.6	-3.3	-3.0	-2.7	-2.0	-3.6	-3.3	-3.0	-2.7	-2.0
X=12H    Y=4H	-3.5	-3.0	-2.9	-2.5	-1.8	-3.5	-3.0	-2.9	-2.5	-1.8	
	Y=6H	-3.6	-3.2	-3.0	-2.7	-2.0	-3.6	-3.2	-3.0	-2.7	-2.0
	Y=8H	-3.6	-3.3	-3.0	-2.7	-2.0	-3.6	-3.3	-3.0	-2.7	-2.0
Variations with the objverver position at spacings											
S=1.0H	0.0/0.0					0.0/0.0					
S=1.5H	0.0/0.0					0.0/0.0					
S=2.0H	0.0/0.0					0.0/0.0					
Reduced UGR Table:											
Nordic Standard Table:	BK0					BK0					
Correction Value	0.0					0.0					

o the CIE Pub.117, data has been corrected, refers to the lamp's lumens 8.2flm.

IES Indoor Report

Photometric Filename:UL-9W-COB.IES

---

Candela Tabulation

V/H	C0. 0	C30. 0	C60. 0	C90. 0	C120. 0	C150. 0	C180. 0	C210. 0	C240. 0	C270. 0	C300. 0	C330. 0
Y 0. 0	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87	1781. 87
Y 1. 0	1792. 31	1777. 77	1757. 19	1757. 33	1743. 79	1747. 93	1785. 48	1775. 55	1778. 07	1775. 27	1772. 16	1767. 00
Y 2. 0	1764. 91	1749. 60	1719. 38	1720. 78	1703. 62	1711. 47	1752. 77	1745. 71	1757. 39	1755. 10	1757. 48	1746. 52
Y 3. 0	1719. 71	1704. 80	1668. 19	1670. 45	1648. 39	1661. 12	1705. 68	1700. 45	1717. 71	1714. 02	1722. 75	1707. 40
Y 4. 0	1658. 52	1646. 64	1605. 56	1609. 41	1579. 74	1599. 78	1645. 89	1640. 27	1661. 78	1656. 64	1670. 25	1652. 33
Y 5. 0	1584. 21	1577. 72	1533. 16	1539. 09	1508. 10	1529. 53	1576. 36	1569. 70	1593. 36	1589. 73	1604. 69	1586. 05
Y 6. 0	1505. 54	1500. 82	1454. 03	1462. 09	1430. 72	1454. 01	1497. 88	1492. 92	1516. 92	1514. 46	1531. 10	1512. 07
Y 7. 0	1421. 22	1418. 92	1371. 94	1381. 61	1349. 02	1375. 36	1415. 93	1412. 51	1436. 49	1433. 19	1451. 53	1432. 02
Y 8. 0	1334. 07	1333. 81	1286. 85	1296. 45	1261. 83	1291. 15	1331. 27	1328. 94	1353. 44	1349. 18	1367. 83	1347. 59
Y 9. 0	1245. 33	1246. 48	1199. 16	1207. 71	1171. 59	1201. 78	1244. 02	1242. 69	1268. 14	1264. 87	1281. 40	1260. 29
Y 10. 0	1157. 85	1157. 79	1109. 34	1118. 32	1081. 66	1110. 69	1154. 02	1153. 97	1182. 28	1179. 08	1194. 59	1171. 61
Y 11. 0	1071. 18	1068. 32	1019. 74	1030. 20	993. 03	1021. 10	1061. 66	1063. 53	1094. 40	1091. 91	1106. 25	1084. 47
Y 12. 0	983. 82	979. 02	933. 76	943. 59	907. 86	934. 08	973. 21	973. 56	1005. 52	1004. 56	1018. 10	998. 47
Y 13. 0	897. 51	892. 93	850. 85	859. 89	825. 49	850. 97	887. 96	887. 71	918. 35	916. 89	931. 11	912. 91
Y 14. 0	814. 65	811. 35	771. 04	777. 99	745. 14	770. 61	805. 94	806. 24	834. 30	833. 22	847. 38	829. 55
Y 15. 0	737. 36	734. 36	695. 36	702. 19	673. 14	694. 09	727. 11	727. 95	755. 67	755. 46	768. 39	751. 19
Y 16. 0	666. 41	662. 57	628. 94	635. 34	610. 13	626. 53	655. 53	655. 46	681. 88	682. 73	695. 05	678. 53
Y 17. 0	603. 95	600. 06	572. 19	577. 34	555. 55	568. 33	592. 03	594. 24	615. 46	617. 83	627. 30	612. 61
Y 18. 0	550. 24	546. 67	523. 43	526. 55	506. 31	517. 90	538. 13	541. 60	560. 34	561. 77	569. 56	556. 53
Y 19. 0	504. 30	500. 43	480. 01	482. 30	464. 37	473. 78	491. 45	495. 61	512. 45	515. 02	520. 24	509. 47
Y 20. 0	464. 34	459. 63	441. 62	443. 17	427. 34	435. 17	450. 66	455. 38	470. 30	473. 56	477. 36	468. 02
Y 21. 0	429. 30	424. 10	408. 16	408. 54	394. 97	401. 27	415. 01	419. 73	432. 96	436. 66	439. 11	431. 11
Y 22. 0	398. 40	393. 55	379. 83	379. 50	368. 79	372. 90	383. 68	387. 66	399. 76	403. 27	405. 73	398. 53
Y 23. 0	372. 01	367. 77	355. 36	354. 08	343. 82	348. 40	356. 91	361. 81	370. 76	373. 60	375. 41	369. 82
Y 24. 0	349. 07	344. 36	333. 01	330. 50	320. 98	325. 43	333. 23	337. 11	345. 65	348. 57	350. 57	345. 70
Y 25. 0	327. 91	322. 05	312. 06	309. 47	301. 79	305. 01	311. 42	314. 14	322. 18	325. 97	327. 06	323. 15
Y 26. 0	308. 81	303. 31	295. 14	291. 73	285. 92	288. 17	292. 64	295. 24	300. 98	305. 52	305. 48	303. 05
Y 27. 0	292. 38	287. 63	279. 78	275. 11	269. 61	271. 57	275. 30	278. 61	283. 58	287. 81	288. 11	286. 68
Y 28. 0	277. 56	272. 26	264. 05	260. 09	253. 16	254. 84	258. 69	261. 52	266. 96	271. 21	272. 65	271. 71
Y 29. 0	263. 04	256. 38	248. 10	244. 26	236. 99	238. 66	240. 90	244. 75	249. 99	256. 41	256. 10	255. 58
Y 30. 0	247. 01	240. 10	231. 80	226. 68	220. 61	221. 61	222. 66	227. 77	233. 27	240. 62	239. 60	239. 64
Y 31. 0	228. 97	223. 30	214. 27	206. 50	203. 14	203. 67	203. 41	210. 77	216. 36	222. 90	223. 10	223. 20
Y 32. 0	209. 68	206. 06	194. 30	187. 36	184. 67	184. 57	184. 44	191. 68	198. 46	202. 29	206. 69	204. 93
Y 33. 0	191. 50	188. 08	175. 22	169. 41	165. 76	165. 96	165. 54	172. 49	179. 43	183. 50	188. 43	185. 13
Y 34. 0	172. 48	169. 00	157. 13	150. 46	146. 57	148. 07	147. 29	153. 62	159. 72	165. 52	169. 68	166. 28
Y 35. 0	154. 57	149. 98	138. 96	132. 64	127. 56	130. 76	129. 43	134. 53	140. 69	146. 71	149. 94	148. 20
Y 36. 0	137. 67	131. 19	121. 21	116. 54	109. 88	114. 06	112. 89	115. 95	123. 16	128. 68	130. 91	130. 37
Y 37. 0	120. 94	112. 61	104. 32	100. 41	92. 85	97. 59	97. 14	98. 23	105. 69	112. 59	112. 46	113. 18
Y 38. 0	104. 84	95. 49	88. 05	84. 11	77. 57	82. 19	81. 77	81. 87	88. 99	96. 75	94. 77	96. 19
Y 39. 0	89. 19	80. 02	72. 68	69. 58	64. 41	67. 56	66. 96	67. 48	73. 47	80. 23	78. 27	80. 46
Y 40. 0	74. 42	66. 47	59. 56	55. 80	53. 08	55. 11	53. 00	54. 56	58. 96	65. 52	63. 78	65. 37
Y 41. 0	60. 33	54. 74	48. 82	43. 24	44. 18	44. 70	39. 91	43. 94	45. 99	51. 21	50. 47	52. 19
Y 42. 0	48. 17	45. 28	39. 85	35. 03	37. 04	36. 44	30. 06	35. 03	35. 91	37. 23	39. 96	41. 02
Y 43. 0	39. 18	37. 83	34. 00	30. 44	31. 96	30. 95	24. 13	28. 37	27. 98	28. 37	31. 59	32. 41
Y 44. 0	34. 06	32. 34	30. 72	28. 16	29. 45	27. 99	20. 91	23. 69	22. 58	23. 72	25. 12	26. 13
Y 45. 0	31. 09	29. 12	29. 27	27. 08	28. 46	26. 98	19. 72	21. 43	19. 64	21. 17	20. 92	22. 32
Y 46. 0	29. 77	27. 71	28. 10	26. 22	27. 42	26. 17	19. 06	20. 67	18. 46	20. 01	18. 75	20. 77

---

IES Indoor Report

Photometric Filename:UL-9W-COB.IES

---

Candela Tabulation - (Cont.)

V/H	C0. 0	C30. 0	C60. 0	C90. 0	C120. 0	C150. 0	C180. 0	C210. 0	C240. 0	C270. 0	C300. 0	C330. 0
Y 47. 0	28. 50	26. 60	27. 17	25. 28	26. 60	25. 31	18. 31	19. 84	17. 73	19. 35	17. 87	19. 69
Y 48. 0	27. 49	25. 44	26. 22	24. 40	25. 54	24. 54	17. 58	19. 14	17. 20	18. 50	17. 05	18. 76
Y 49. 0	26. 47	24. 57	25. 32	23. 66	24. 66	23. 67	16. 88	18. 32	16. 55	17. 72	16. 25	17. 83
Y 50. 0	25. 60	23. 83	24. 61	23. 11	23. 97	23. 07	16. 36	17. 61	15. 90	17. 16	15. 57	17. 22
Y 51. 0	24. 84	23. 10	23. 99	22. 55	23. 30	22. 49	15. 86	17. 07	15. 37	16. 55	15. 00	16. 64
Y 52. 0	24. 15	22. 43	23. 40	21. 90	22. 67	21. 87	15. 37	16. 61	15. 07	16. 10	14. 64	16. 10
Y 53. 0	23. 30	21. 74	22. 53	21. 18	21. 99	21. 18	14. 82	16. 05	14. 53	15. 67	14. 16	15. 50
Y 54. 0	22. 47	21. 03	21. 77	20. 66	21. 32	20. 52	14. 11	15. 35	13. 94	15. 02	13. 58	14. 90
Y 55. 0	21. 85	20. 40	21. 23	20. 07	20. 66	19. 96	13. 70	14. 80	13. 45	14. 55	13. 17	14. 39
Y 56. 0	21. 16	19. 81	20. 54	19. 37	19. 75	19. 24	13. 26	14. 29	13. 08	14. 06	12. 70	14. 07
Y 57. 0	20. 27	19. 05	19. 72	18. 58	18. 98	18. 43	12. 67	13. 61	12. 48	13. 46	12. 28	13. 43
Y 58. 0	19. 40	18. 09	18. 77	17. 57	18. 17	17. 61	11. 89	12. 92	11. 86	12. 72	11. 52	12. 77
Y 59. 0	18. 60	17. 27	18. 07	16. 86	17. 55	16. 82	11. 22	12. 28	11. 09	12. 01	10. 84	12. 08
Y 60. 0	17. 86	16. 67	17. 25	16. 35	16. 90	16. 23	10. 75	11. 76	10. 53	11. 53	10. 37	11. 55
Y 61. 0	17. 15	16. 08	16. 48	15. 57	16. 08	15. 47	10. 20	11. 15	10. 09	10. 94	9. 89	10. 94
Y 62. 0	16. 27	15. 17	15. 68	14. 70	15. 32	14. 60	9. 55	10. 34	9. 41	10. 37	9. 30	10. 33
Y 63. 0	15. 45	14. 36	14. 98	13. 97	14. 60	14. 08	8. 85	9. 72	8. 70	9. 68	8. 66	9. 71
Y 64. 0	14. 82	13. 73	14. 36	13. 32	14. 05	13. 36	8. 36	9. 17	8. 18	9. 10	8. 16	9. 20
Y 65. 0	14. 19	13. 16	13. 82	12. 87	13. 50	12. 85	7. 87	8. 64	7. 64	8. 63	7. 65	8. 64
Y 66. 0	13. 51	12. 62	13. 15	12. 32	12. 95	12. 27	7. 32	8. 09	7. 21	8. 16	7. 24	8. 17
Y 67. 0	13. 02	11. 97	12. 59	11. 76	12. 47	11. 75	6. 94	7. 68	6. 86	7. 67	6. 83	7. 64
Y 68. 0	12. 70	11. 63	12. 25	11. 51	12. 12	11. 41	6. 59	7. 38	6. 62	7. 42	6. 52	7. 30
Y 69. 0	12. 32	11. 22	11. 92	11. 14	11. 65	11. 08	6. 35	7. 08	6. 35	7. 09	6. 24	7. 06
Y 70. 0	11. 95	11. 03	11. 68	10. 83	11. 44	10. 78	6. 16	6. 83	6. 10	6. 84	6. 06	6. 79
Y 71. 0	11. 63	10. 69	11. 27	10. 45	11. 05	10. 44	5. 95	6. 56	5. 90	6. 68	5. 86	6. 57
Y 72. 0	11. 26	10. 29	10. 96	10. 17	10. 80	10. 17	5. 60	6. 26	5. 65	6. 31	5. 53	6. 25
Y 73. 0	10. 94	10. 06	10. 71	9. 89	10. 56	9. 89	5. 40	6. 14	5. 34	6. 06	5. 45	6. 10
Y 74. 0	10. 75	9. 89	10. 48	9. 73	10. 34	9. 69	5. 25	5. 91	5. 23	5. 91	5. 26	6. 02
Y 75. 0	10. 48	9. 62	10. 28	9. 51	10. 15	9. 56	5. 02	5. 89	5. 13	5. 71	5. 23	5. 74
Y 76. 0	10. 18	9. 40	10. 05	9. 22	9. 87	9. 23	4. 88	5. 60	4. 99	5. 65	5. 01	5. 56
Y 77. 0	9. 95	9. 20	9. 77	9. 09	9. 67	9. 01	4. 70	5. 44	4. 71	5. 46	4. 80	5. 41
Y 78. 0	9. 75	8. 99	9. 65	8. 93	9. 41	8. 87	4. 49	5. 26	4. 60	5. 31	4. 62	5. 35
Y 79. 0	9. 51	8. 81	9. 47	8. 73	9. 27	8. 67	4. 40	5. 14	4. 45	5. 05	4. 50	5. 05
Y 80. 0	9. 30	8. 62	9. 25	8. 55	9. 04	8. 52	4. 30	4. 99	4. 35	5. 00	4. 40	4. 91
Y 81. 0	9. 03	8. 42	8. 98	8. 36	8. 80	8. 23	4. 05	4. 79	4. 25	4. 81	4. 24	4. 76
Y 82. 0	8. 80	8. 19	8. 81	8. 25	8. 58	8. 07	3. 88	4. 69	4. 13	4. 57	4. 14	4. 60
Y 83. 0	8. 58	8. 06	8. 52	8. 05	8. 33	7. 85	3. 76	4. 59	3. 97	4. 50	3. 92	4. 44
Y 84. 0	8. 45	7. 80	8. 37	7. 81	8. 10	7. 73	3. 68	4. 33	3. 94	4. 32	3. 81	4. 28
Y 85. 0	8. 16	7. 69	8. 11	7. 61	7. 96	7. 51	3. 57	4. 29	3. 81	4. 22	3. 77	4. 16
Y 86. 0	7. 94	7. 35	7. 92	7. 50	7. 86	7. 30	3. 41	4. 10	3. 63	4. 07	3. 54	3. 99
Y 87. 0	7. 81	7. 29	7. 76	7. 25	7. 59	7. 17	3. 36	3. 98	3. 48	4. 03	3. 48	3. 95
Y 88. 0	7. 61	7. 05	7. 66	7. 20	7. 35	7. 02	3. 26	3. 82	3. 34	3. 84	3. 46	3. 78
Y 89. 0	7. 38	6. 92	7. 53	7. 04	7. 29	6. 87	3. 25	3. 72	3. 27	3. 76	3. 28	3. 68
Y 90. 0	7. 26	6. 68	7. 29	6. 91	7. 13	6. 78	3. 18	3. 62	3. 34	3. 78	3. 28	3. 58
Y 91. 0	7. 08	6. 67	7. 13	6. 81	6. 98	6. 62	3. 14	3. 57	3. 26	3. 65	3. 19	3. 57
Y 92. 0	7. 01	6. 58	6. 96	6. 61	6. 91	6. 46	3. 11	3. 67	3. 28	3. 63	3. 14	3. 58
Y 93. 0	6. 80	6. 43	6. 83	6. 47	6. 74	6. 39	3. 09	3. 67	3. 23	3. 60	3. 18	3. 56



IES Indoor Report

Photometric Filename:UL-9W-COB.IES

---

Candela Tabulation - (Cont.)

V/H	C0. 0	C30. 0	C60. 0	C90. 0	C120. 0	C150. 0	C180. 0	C210. 0	C240. 0	C270. 0	C300. 0	C330. 0
Y 94. 0	6. 70	6. 38	6. 78	6. 36	6. 70	6. 25	3. 15	3. 65	3. 27	3. 48	3. 20	3. 58
Y 95. 0	6. 68	6. 21	6. 70	6. 17	6. 61	6. 18	3. 06	3. 63	3. 34	3. 49	3. 14	3. 54
Y 96. 0	6. 45	6. 14	6. 49	6. 16	6. 46	6. 07	3. 09	3. 55	3. 27	3. 49	3. 09	3. 51
Y 97. 0	6. 41	5. 93	6. 49	6. 00	6. 37	5. 93	3. 12	3. 56	3. 22	3. 43	3. 12	3. 50
Y 98. 0	6. 34	5. 87	6. 26	5. 89	6. 24	5. 83	3. 05	3. 56	3. 17	3. 57	3. 09	3. 43
Y 99. 0	6. 21	5. 80	6. 24	5. 88	6. 16	5. 79	3. 11	3. 67	3. 25	3. 51	3. 25	3. 43
Y 100. 0	6. 07	5. 79	6. 18	5. 77	6. 01	5. 71	3. 09	3. 68	3. 29	3. 50	3. 14	3. 48
Y 101. 0	5. 97	5. 60	6. 05	5. 59	5. 91	5. 61	3. 10	3. 68	3. 34	3. 56	3. 24	3. 48
Y 102. 0	5. 89	5. 57	6. 03	5. 55	5. 94	5. 49	3. 19	3. 64	3. 28	3. 55	3. 22	3. 51
Y 103. 0	5. 83	5. 49	5. 94	5. 50	5. 77	5. 46	3. 14	3. 61	3. 35	3. 55	3. 23	3. 56
Y 104. 0	5. 79	5. 41	5. 86	5. 43	5. 73	5. 39	3. 12	3. 62	3. 31	3. 55	3. 27	3. 57
Y 105. 0	5. 74	5. 30	5. 76	5. 43	5. 70	5. 41	3. 21	3. 61	3. 38	3. 51	3. 38	3. 59
Y 106. 0	5. 67	5. 31	5. 76	5. 34	5. 61	5. 34	3. 22	3. 71	3. 37	3. 61	3. 34	3. 57
Y 107. 0	5. 60	5. 24	5. 65	5. 30	5. 66	5. 32	3. 22	3. 73	3. 42	3. 63	3. 31	3. 65
Y 108. 0	5. 47	5. 20	5. 60	5. 33	5. 59	5. 31	3. 36	3. 78	3. 50	3. 69	3. 43	3. 64
Y 109. 0	5. 41	5. 22	5. 60	5. 27	5. 56	5. 32	3. 36	3. 74	3. 52	3. 73	3. 46	3. 68
Y 110. 0	5. 48	5. 27	5. 61	5. 31	5. 55	5. 29	3. 53	3. 81	3. 57	3. 70	3. 47	3. 69
Y 111. 0	5. 49	5. 22	5. 59	5. 37	5. 44	5. 30	3. 50	3. 88	3. 58	3. 73	3. 57	3. 80
Y 112. 0	5. 55	5. 26	5. 57	5. 34	5. 52	5. 26	3. 64	4. 04	3. 66	3. 70	3. 56	3. 82
Y 113. 0	5. 44	5. 24	5. 62	5. 28	5. 48	5. 31	3. 68	3. 90	3. 77	3. 72	3. 62	3. 87
Y 114. 0	5. 47	5. 24	5. 61	5. 29	5. 52	5. 34	3. 68	3. 98	3. 88	3. 87	3. 73	3. 86
Y 115. 0	5. 57	5. 32	5. 64	5. 29	5. 45	5. 34	3. 88	4. 12	4. 01	3. 95	3. 74	3. 90
Y 116. 0	5. 51	5. 33	5. 60	5. 39	5. 59	5. 31	3. 98	4. 20	4. 03	4. 16	3. 69	3. 98
Y 117. 0	5. 47	5. 26	5. 61	5. 44	5. 58	5. 27	4. 08	4. 28	4. 09	4. 13	3. 88	4. 01
Y 118. 0	5. 60	5. 36	5. 60	5. 37	5. 67	5. 37	4. 14	4. 38	4. 19	4. 33	4. 00	4. 15
Y 119. 0	5. 64	5. 41	5. 74	5. 50	5. 61	5. 40	4. 27	4. 51	4. 27	4. 25	4. 18	4. 21
Y 120. 0	5. 51	5. 45	5. 76	5. 51	5. 62	5. 37	4. 37	4. 57	4. 36	4. 41	4. 22	4. 42
Y 121. 0	5. 64	5. 51	5. 79	5. 59	5. 76	5. 42	4. 59	4. 69	4. 54	4. 43	4. 40	4. 51
Y 122. 0	5. 68	5. 48	5. 76	5. 67	5. 82	5. 49	4. 62	4. 76	4. 71	4. 57	4. 49	4. 63
Y 123. 0	5. 72	5. 53	5. 85	5. 66	5. 91	5. 53	4. 81	4. 92	4. 73	4. 79	4. 53	4. 78
Y 124. 0	5. 90	5. 63	5. 97	5. 79	5. 95	5. 66	4. 96	5. 02	4. 83	4. 89	4. 73	4. 84
Y 125. 0	5. 98	5. 55	6. 00	5. 88	5. 99	5. 79	5. 11	5. 15	4. 95	5. 07	4. 94	4. 97
Y 126. 0	5. 99	5. 68	6. 07	5. 94	6. 12	5. 87	5. 28	5. 27	5. 16	5. 17	5. 02	5. 08
Y 127. 0	6. 00	5. 79	6. 13	6. 03	6. 18	5. 95	5. 39	5. 38	5. 34	5. 28	5. 20	5. 23
Y 128. 0	6. 15	5. 79	6. 30	6. 03	6. 23	6. 02	5. 55	5. 59	5. 47	5. 41	5. 35	5. 43
Y 129. 0	6. 26	6. 07	6. 39	6. 25	6. 42	6. 21	5. 68	5. 75	5. 61	5. 61	5. 41	5. 60
Y 130. 0	6. 40	6. 26	6. 50	6. 39	6. 37	6. 28	5. 92	5. 97	5. 77	5. 90	5. 60	5. 81
Y 131. 0	6. 43	6. 41	6. 55	6. 47	6. 62	6. 38	6. 05	6. 11	5. 97	6. 01	5. 76	5. 95
Y 132. 0	6. 60	6. 51	6. 56	6. 58	6. 69	6. 54	6. 28	6. 31	6. 12	6. 19	5. 89	6. 04
Y 133. 0	6. 62	6. 66	6. 83	6. 71	6. 82	6. 71	6. 43	6. 51	6. 31	6. 30	6. 11	6. 21
Y 134. 0	6. 82	6. 80	6. 88	6. 78	6. 84	6. 78	6. 62	6. 67	6. 55	6. 48	6. 30	6. 29
Y 135. 0	6. 95	6. 91	7. 02	6. 97	6. 92	6. 93	6. 81	6. 82	6. 68	6. 64	6. 45	6. 43
Y 136. 0	7. 16	7. 02	7. 10	7. 03	7. 06	7. 04	6. 95	6. 93	6. 81	6. 84	6. 61	6. 61
Y 137. 0	7. 26	7. 19	7. 25	7. 14	7. 22	7. 27	7. 07	7. 09	6. 97	6. 97	6. 82	6. 81
Y 138. 0	7. 44	7. 30	7. 37	7. 33	7. 34	7. 40	7. 24	7. 28	7. 15	7. 08	7. 00	7. 03
Y 139. 0	7. 55	7. 39	7. 53	7. 49	7. 50	7. 49	7. 49	7. 36	7. 29	7. 27	7. 05	7. 12
Y 140. 0	7. 67	7. 55	7. 68	7. 63	7. 66	7. 63	7. 50	7. 60	7. 47	7. 40	7. 22	7. 27

**Photometric Filename:UL-9W-COB.IES**

### Candela Tabulation - (Cont.)

V/H	C0.0	C30.0	C60.0	C90.0	C120.0	C150.0	C180.0	C210.0	C240.0	C270.0	C300.0	C330.0
Y 141.0	7.84	7.68	7.71	7.74	7.82	7.70	7.64	7.68	7.64	7.55	7.37	7.36
Y 142.0	7.85	7.80	7.86	7.84	7.84	7.76	7.71	7.84	7.63	7.69	7.45	7.49
Y 143.0	8.02	7.96	8.00	7.97	7.90	8.00	8.00	7.83	7.82	7.78	7.63	7.70
Y 144.0	8.13	7.99	8.08	7.99	8.01	8.08	8.06	8.05	7.83	7.88	7.73	7.76
Y 145.0	8.18	8.12	8.11	8.13	8.12	8.18	8.12	8.13	8.04	7.99	7.84	7.85
Y 146.0	8.23	8.16	8.17	8.19	8.19	8.19	8.36	8.22	8.11	8.12	8.01	7.89
Y 147.0	8.43	8.29	8.33	8.28	8.26	8.20	8.36	8.24	8.20	8.15	8.05	7.99
Y 148.0	8.49	8.37	8.45	8.36	8.38	8.49	8.46	8.30	8.21	8.29	8.15	8.14
Y 149.0	8.50	8.41	8.43	8.32	8.39	8.46	8.51	8.46	8.40	8.32	8.25	8.26
Y 150.0	8.59	8.49	8.52	8.42	8.36	8.57	8.55	8.48	8.42	8.34	8.20	8.21
Y 151.0	8.65	8.53	8.62	8.51	8.43	8.56	8.58	8.52	8.47	8.41	8.33	8.36
Y 152.0	8.63	8.63	8.53	8.52	8.51	8.65	8.72	8.59	8.53	8.45	8.37	8.46
Y 153.0	8.74	8.54	8.58	8.50	8.60	8.66	8.72	8.60	8.54	8.56	8.49	8.42
Y 154.0	8.73	8.64	8.68	8.54	8.63	8.62	8.71	8.68	8.55	8.53	8.49	8.44
Y 155.0	8.67	8.69	8.78	8.56	8.58	8.73	8.78	8.71	8.64	8.61	8.58	8.57
Y 156.0	8.76	8.70	8.78	8.51	8.71	8.62	8.94	8.78	8.76	8.59	8.66	8.57
Y 157.0	8.84	8.62	8.74	8.54	8.67	8.73	8.95	8.75	8.71	8.61	8.69	8.56
Y 158.0	8.80	8.68	8.72	8.55	8.73	8.73	8.87	8.78	8.83	8.67	8.72	8.62
Y 159.0	8.76	8.58	8.75	8.52	8.65	8.65	8.92	8.81	8.85	8.62	8.72	8.59
Y 160.0	8.76	8.67	8.73	8.60	8.66	8.67	8.92	8.84	8.88	8.70	8.68	8.67
Y 161.0	8.77	8.72	8.66	8.64	8.78	8.68	8.93	8.83	8.83	8.73	8.70	8.68
Y 162.0	8.81	8.76	8.65	8.61	8.77	8.74	8.95	8.82	8.85	8.69	8.68	8.71
Y 163.0	8.87	8.77	8.81	8.64	8.71	8.60	8.93	8.94	8.89	8.67	8.73	8.64
Y 164.0	8.83	8.68	8.76	8.62	8.66	8.63	8.97	8.90	8.82	8.76	8.61	8.65
Y 165.0	8.75	8.63	8.69	8.61	8.68	8.61	8.96	8.85	8.73	8.81	8.66	8.65
Y 166.0	8.73	8.66	8.65	8.64	8.65	8.60	8.87	8.84	8.79	8.69	8.64	8.65
Y 167.0	8.80	8.61	8.68	8.69	8.70	8.61	8.99	8.84	8.70	8.72	8.64	8.59
Y 168.0	8.70	8.62	8.59	8.69	8.56	8.61	8.88	8.75	8.64	8.75	8.65	8.63
Y 169.0	8.70	8.62	8.64	8.68	8.60	8.59	8.92	8.69	8.64	8.73	8.51	8.45
Y 170.0	8.64	8.46	8.59	8.65	8.49	8.47	8.81	8.62	8.60	8.65	8.58	8.44
Y 171.0	8.65	8.48	8.60	8.64	8.47	8.40	8.74	8.75	8.60	8.61	8.42	8.39
Y 172.0	8.56	8.44	8.46	8.63	8.49	8.38	8.79	8.61	8.54	8.58	8.44	8.32