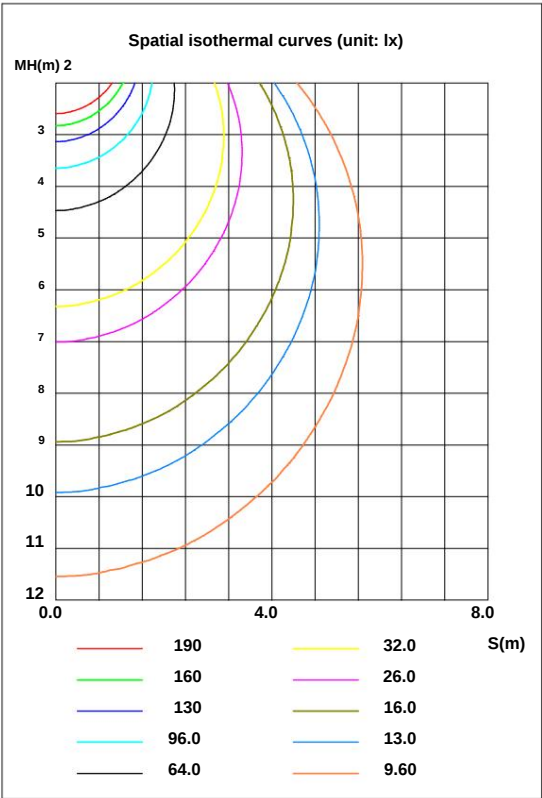
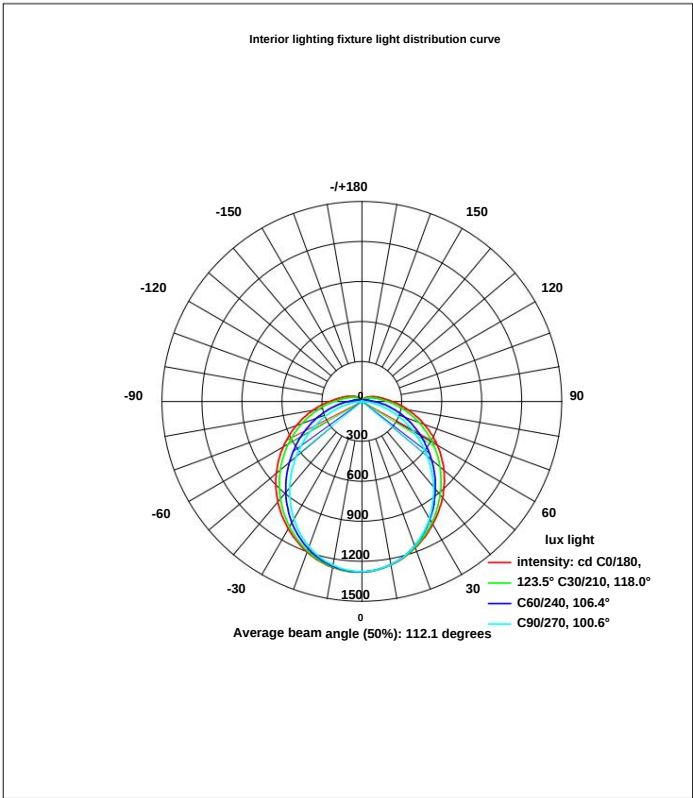


Indoor lighting photometric data

Measured parameters: U: 229.4, VI: 0.1600, AP: 35.90W, PF: 0.9730, Measured optical throughput: 4139.3 x 1 lm		
Lighting Fixture Name: FF20 6500K.Lighting	Lighting fixture type:	Light fixture weight:
specifications:	External dimensions: 1.255*0.056*0.063 Test number:	
Manufacturer:	Light-emitting aperture: 1.255*0.056	Protective corner:

Light source data		Photometric data: Luminous efficacy: 115.30 lm/W			
model	FF20 6500K	Peak luminous intensity (cd)	1281	S/MH(C0/180)	1.29
Nominal power (W)	36	Lighting efficiency (%)	100.0	S/MH(C90/270)	1.20
Rated power supply voltage (V)	230	Total luminous flux (lm)	4139.3	h UP,DN(C0-180)	3.7,45.8
Rated luminous flux (lm)	4139.3	CIE Classification	direct	h UP,DN(C180-360)	3.9,46.6
Number of light sources inside the lamp (units)	1	Up-projection luminous flux ratio (%)	7.6	CIBSE SHR NOM	1.25
Measured power supply voltage (V)	230	Down-emitting luminous flux ratio (%)	92.4	CIBSE SHR MAX	1.35



Angle range: 0 degrees - 360 degrees
Angle C interval: 30.0 degrees;
Test speed: Fast;
Ambient temperature: 24.6;
Tester;;
Test date: 2025-08-12

γ angle range: 0 degrees - 180
degrees; γ angle interval: 1.0 degree;
Testing system: EVERFINE GO-2000H_V1 system V2.0.286;
Ambient humidity: 46.0%;
Testing distance: 9.960 meters [K=1.0000] ;
Remarks:

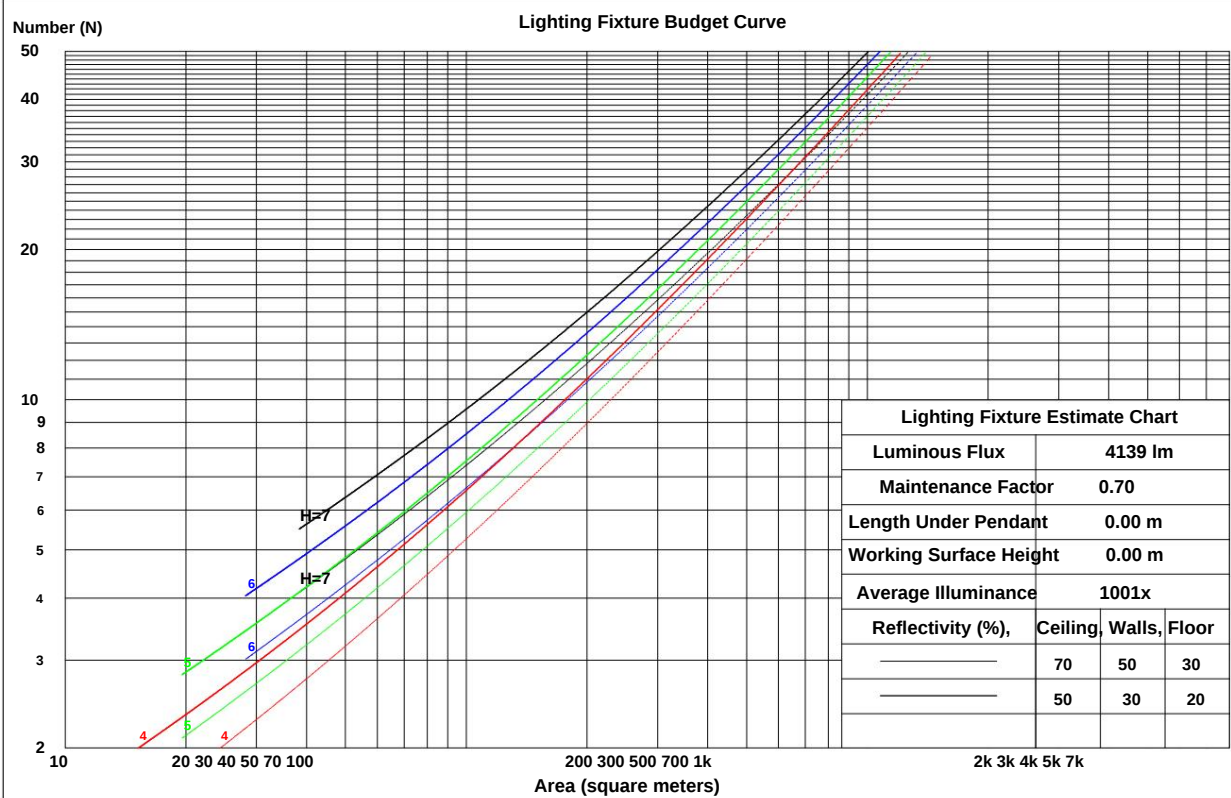
Luminous flux of luminaire ring

Annular luminous flux:

°	C0	C45	C90	Q135	C180	C225	C270	C315	c(°)	γ ring	γ total	%lum,lamp
10	1246	1244	1244	1250	1266	1259	1248	1242	0- 10	120.5	120.5	2.91,2.91
20	1168	1159	1154	1175	1202	1186	1161	1160	10- 20	342.9	463.5	11.2,11.2
30	1063	1035	1014	1057	1106	1070	1022	1037	20- 30	513.5	977.0	23.6,23.6
40	942.8	886.0	836.5	908.8	982.3	921.5	844.2	888.4	30- 40	612.1	1589	38.4,38.4
50	804.1	723.5	640.2	744.1	839.8	756.5	648.3	726.5	40- 50	632.8	2222	53.7,53.7
60	653.6	558.0	444.8	574.2	683.9	585.2	449.9	560.5	50- 60	582.5	2804	67.8,67.8
70	495.5	396.8	256.5	409.5	523.2	418.5	260.9	398.8	60- 70	476.8	3281	79.3,79.3
80	347.0	250.5	92.10	260.6	371.1	267.7	93.52	251.8	70- 80	338.8	3620	87.5,87.5
90	229.5	145.2	0.3759	152.6	245.8	157.3	0.5988	145.7	80- 90	204.9	3825	92.4,92.4
100	153.2	91.07	0.6021	97.80	165.6	100.2	1.545	90.78	90-100	122.7	3948	95.4,95.4
110	105.9	59.43	0.8401	65.68	115.1	67.09	1.831	59.08	100-110	78.72	4026	97.3,97.3
120	73.24	38.93	1.150	45.01	80.58	45.93	1.182	38.39	110-120	49.78	4076	98.5,98.5
130	49.73	23.89	1.487	31.21	56.11	31.71	1.486	23.17	120-130	30.55	4107	99.2,99.2
140	32.69	14.40	1.807	21.04	37.72	21.65	1.806	13.70	130-140	17.44	4124	99.6,99.6
150	20.23	8.654	2.122	14.00	23.76	13.98	2.105	8.000	140-150	9.194	4133	99.9,99.9
160	10.91	5.263	2.371	8.272	13.49	8.344	2.348	4.876	150-160	4.247	4137	100,100
170	4.685	3.293	2.536	4.478	5.903	4.459	2.486	3.191	160-170	1.532	4139	100,100
180	2.586	2.608	2.608	2.625	2.614	2.622	2.608	2.622	170-180	0.3053	4139	100,100
Unit: °	Light intensity: cd									Unit: lm		

Working surface utilization coefficient and lighting fixture estimate curve

ceiling	80%			70%			50%			30%			10%			0
wall	50% 30% 10%			50% 30% 10%			50% 30% 10%			50% 30% 10%			50% 30% 10%			0
floor	20%			20%			20%			20%			20%			0
Room space ratio	Working face utilization coefficient															
0.0	1.17	1.17	1.17	1.14	1.14	1.14	1.07	1.07	1.07	1.01	1.01	1.01	.95	.95	.95	.92
1.0	1.00	.95	.91	.97	.93	.89	.91	.88	.84	.86	.83	.81	.81	.79	.77	.74
2.0	.87	.79	.73	.84	.77	.72	.79	.74	.69	.75	.70	.66	.71	.67	.63	.61
3.0	.76	.67	.60	.74	.66	.59	.69	.63	.57	.66	.60	.55	.62	.57	.53	.51
4.0	.67	.58	.51	.65	.57	.50	.62	.54	.49	.58	.52	.47	.55	.50	.46	.43
5.0	.60	.50	.44	.58	.49	.43	.55	.48	.42	.52	.46	.41	.50	.44	.40	.37
6.0	.54	.45	.38	.52	.44	.37	.50	.42	.37	.47	.41	.36	.45	.39	.35	.32
7.0	.49	.40	.33	.47	.39	.33	.45	.38	.32	.43	.36	.32	.41	.35	.31	.29
8.0	.44	.36	.30	.43	.35	.29	.41	.34	.29	.39	.33	.28	.38	.32	.28	.26
9.0	.41	.32	.27	.40	.32	.26	.38	.31	.26	.36	.30	.25	.35	.29	.25	.23
10.0	.37	.30	.24	.37	.29	.24	.35	.28	.24	.34	.27	.23	.32	.27	.23	.21



Angle range: 0 degrees - 360 degrees

Angle C interval: 30.0 degrees;

Test speed: Fast;

Ambient temperature: 24.6°;

Tester:

Test date: 2025-08-12

γ angle range: 0 degrees - 180

degrees; γ angle interval:

1.0 degree; Testing system: EVERFINE GO-2000H_V1 system V2.0.286;

Ambient humidity: 46.0%;

Testing distance: 9.960 meters [K=1.0000] ;

Remarks:

Wall and ceiling utilization rate

Ceiling,	80%			70%			50%			30%			10%			0
walls,	50% 30% 10%			50% 30% 10%			50% 30% 10%			50% 30% 10%			50% 30% 10%			0
floor,	20%			20%			20%			20%			20%			0
room space ratio	Wall surface utilization rate															
0.0																
1.0	.348	.198	.063	.338	.193	.061	.320	.184	.059	.304	.175	.056	.289	.167	.054	
2.0	.311	.171	.052	.303	.167	.051	.287	.160	.050	.272	.153	.048	.259	.146	.046	
3.0	.282	.150	.045	.274	.147	.044	.260	.141	.043	.247	.135	.041	.235	.130	.040	
4.0	.257	.133	.039	.250	.131	.039	.237	.126	.038	.225	.121	.036	.214	.116	.035	
5.0	.235	.120	.035	.229	.118	.034	.218	.113	.033	.207	.109	.032	.197	.105	.032	
6.0	.217	.109	.031	.211	.107	.031	.201	.103	.030	.191	.099	.029	.182	.096	.028	
7.0	.201	.099	.028	.196	.098	.028	.187	.094	.027	.178	.091	.027	.169	.088	.026	
8.0	.187	.091	.026	.182	.090	.025	.174	.087	.025	.166	.084	.024	.158	.081	.024	
9.0	.175	.085	.024	.171	.083	.023	.163	.081	.023	.156	.078	.022	.149	.076	.022	
10.0	.164	.079	.022	.160	.077	.022	.153	.075	.021	.146	.073	.021	.140	.070	.020	

ceiling	80%			70%			50%			30%			10%			0
wall	50% 30% 10%			50% 30% 10%			50% 30% 10%			50% 30% 10%			50% 30% 10%			0
Floor	20%			20%			20%			20%			20%			0
room space ratio	Ceiling utilization rate															
0.0	.248	.248	.248	.212	.212	.212	.145	.145	.145	.083	.083	.083	.027	.027	.027	
1.0	.241	.214	.190	.206	.184	.163	.141	.126	.113	.081	.073	.066	.026	.024	.021	
2.0	.234	.191	.154	.200	.164	.133	.137	.113	.093	.079	.066	.055	.025	.021	.018	
3.0	.226	.173	.132	.194	.150	.114	.133	.104	.080	.077	.061	.047	.025	.020	.015	
4.0	.218	.160	.117	.187	.139	.101	.129	.097	.071	.074	.057	.042	.024	.018	.014	
5.0	.210	.150	.106	.181	.130	.092	.124	.091	.065	.072	.053	.039	.023	.017	.013	
6.0	.203	.142	.098	.174	.123	.086	.120	.086	.061	.070	.051	.036	.023	.017	.012	
7.0	.196	.135	.093	.169	.117	.081	.117	.082	.057	.068	.048	.034	.022	.016	.011	
8.0	.189	.130	.089	.163	.112	.077	.113	.079	.055	.066	.047	.033	.021	.015	.011	
9.0	.183	.125	.085	.158	.108	.074	.109	.076	.053	.064	.045	.031	.021	.015	.010	
10.0	.178	.120	.083	.153	.105	.072	.106	.074	.051	.062	.044	.031	.020	.014	.010	

Angle range: 0 degrees - 360 degrees
Angle C interval: 30.0 degrees;
Test speed: Fast;
Ambient temperature: 24.6ÿ;
Tester;;
Test date: 2025-08-12

ÿ angle range: 0 degrees - 180 degrees;
ÿ angle interval: 1.0 degree;
Testing system: EVERFINE GO-2000H_V1 system V2.0.286;
Ambient humidity: 46.0%;
Testing distance: 9.960 meters [K=1.0000] ;
Remarks:

UGR (Unified Glare Rating) data table

Reflectance: Ceiling	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
wall	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working face	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room size	Viewed crosswise					Viewed endwise					
x = 2H y = 2H	22.6	24.0	22.9	24.3	24.7	21.1	22.5	21.5	22.9	23.2	
3H	24.7	26.0	25.1	26.4	26.8	22.4	23.8	22.8	24.1	24.5	
4H	25.8	27.0	26.2	27.4	27.8	22.9	24.2	23.4	24.6	25.0	
6H	26.9	28.1	27.3	28.5	28.9	23.3	24.5	23.7	24.9	25.3	
8H	27.5	28.7	28.0	29.1	29.5	23.3	24.5	23.8	24.9	25.4	
12H	28.2	29.3	28.7	29.8	30.2	23.4	24.5	23.8	24.9	25.4	
4H	2H	23.1	24.4	23.5	24.7	25.2	22.0	23.2	22.4	23.6	24.0
3H	25.4	26.6	25.9	27.0	27.5	23.5	24.7	24.0	25.1	25.6	
4H	26.7	27.7	27.2	28.2	28.7	24.2	25.2	24.7	25.7	26.2	
6H	28.0	29.0	28.6	29.4	30.0	24.7	25.6	25.2	26.1	26.6	
8H	28.8	29.6	29.3	30.1	30.7	24.8	25.7	25.4	26.2	26.8	
12H	29.6	30.4	30.1	30.9	31.5	24.9	25.7	25.5	26.2	26.8	
8H	4H	27.0	27.8	27.5	28.3	28.9	24.9	25.7	25.4	26.2	26.8
6H	28.6	29.3	29.2	29.9	30.4	25.7	26.4	26.2	26.9	27.5	
8H	29.5	30.2	30.1	30.7	31.3	26.0	26.6	26.5	27.2	27.8	
12H	30.6	31.1	31.2	31.7	32.4	26.2	26.8	26.8	27.3	28.0	
12H	4H	27.0	27.8	27.5	28.3	28.9	25.1	25.9	25.6	26.4	26.9
6H	28.7	29.3	29.3	29.9	30.5	26.0	26.6	26.6	27.2	27.8	
8H	29.7	30.3	30.3	30.8	31.5	26.4	27.0	27.0	27.6	28.2	
UGR changes caused by observer position when lighting is arranged at different intervals:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.1 / - 0.4					

According to CIE Pub.117, the table has been corrected for the luminous flux of a 4139lm light source (8log(F/F0) = 4.9).

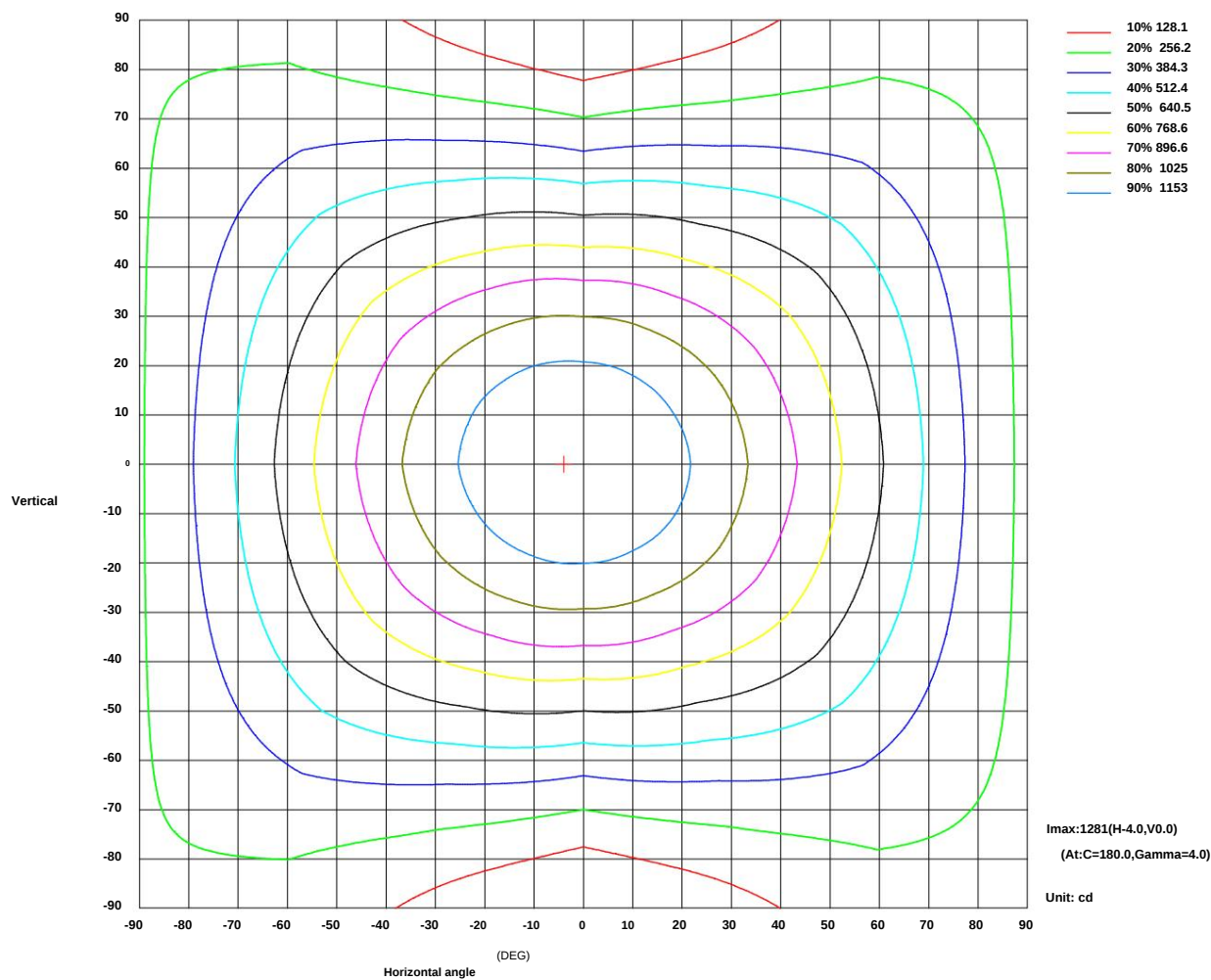
UF Utilization Coefficient Table

Reflectance										
ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
wall	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
working face	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
Ventricular index	Using the coefficient UTILIZATION FACTORS(%) k(RI) x RCR = 5									
k = 0.60	54	42	35	53	41	35	51	41	34	28
0.80	63	51	43	62	51	43	60	50	43	35
1.00	71	59	52	70	59	51	67	60	50	43
1.25	78	67	59	76	66	58	73	64	57	49
1.50	83	72	65	81	71	64	77	69	62	54
2.00	90	80	73	88	79	72	83	76	70	61
2.50	94	85	78	92	84	77	87	80	75	65
3.00	98	90	83	95	88	82	90	84	79	68
4.00	102	95	90	99	93	88	94	89	84	73
5.00	105	99	94	102	96	92	96	92	88	76
ROOM INDEX	UF (Total)									UF (Direct)
According to standard document DIN EN 13032-2 2004			Hanging lights				Installation distance to height ratio SHR _{NOM} = 1.25			

Angle range: 0 degrees - 360 degrees
C-angle interval: 30.0 degrees
Test Speed: Fast;
Ambient Temperature: 24.6ÿ;
Tester;;
Test Date: 2025-08-12

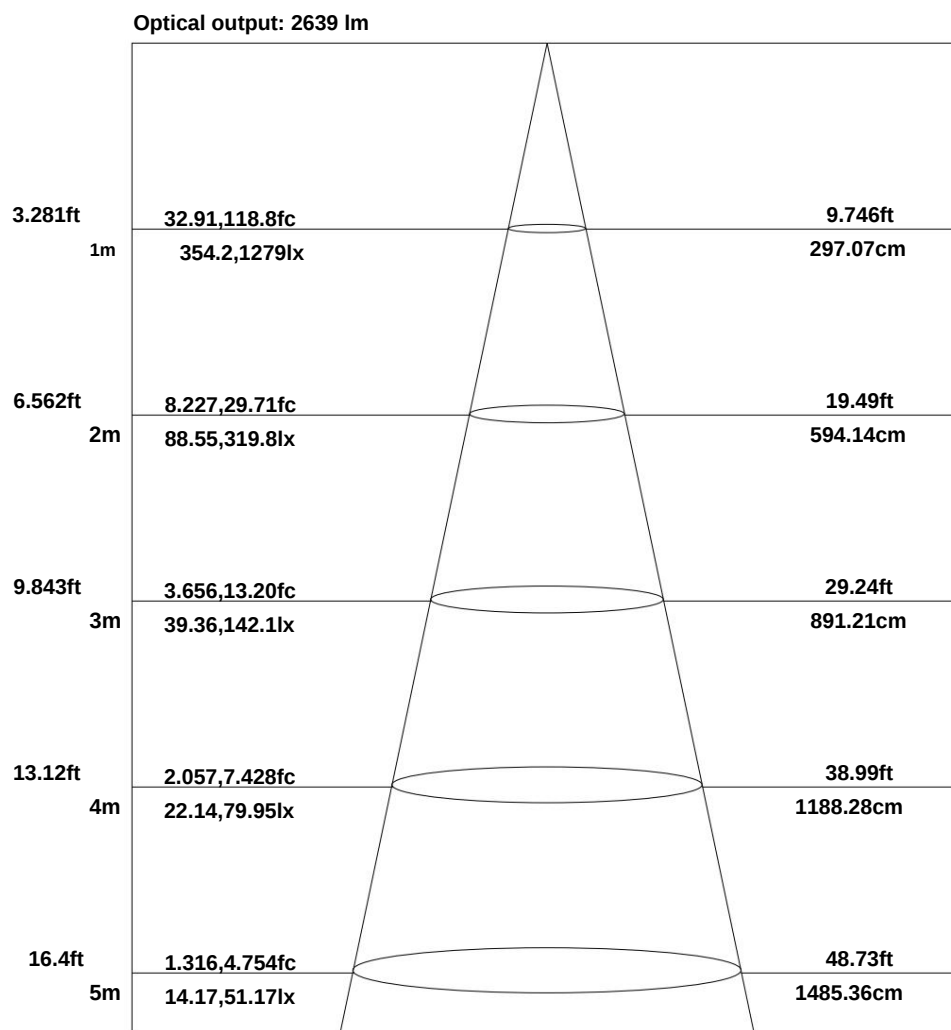
ÿ angle range: 0 degrees - 180 degrees
ÿ angle interval: 1.0 degree
Test System: EVERFINE GO-2000H_V1 System V2.0.286
Ambient humidity: 46.0%
Test distance: 9.960 meters [K=1.0000]
Remark:

Luminous intensity curves of lamps, etc.



Angle range: 0 degrees - 360 degrees
Angle C interval: 30.0 degrees;
Test speed: Fast;
Ambient temperature: 24.6°C;
Tester:;
Test date: 2025-08-12

γ angle range: 0 degrees - 180 degrees;
γ angle interval: 1.0 degree;
Testing system: EVERFINE GO-2000H_V1 system V2.0.286;
Ambient humidity: 46.0%;
Testing distance: 9.960 meters [K=1.0000] ;
Remarks:

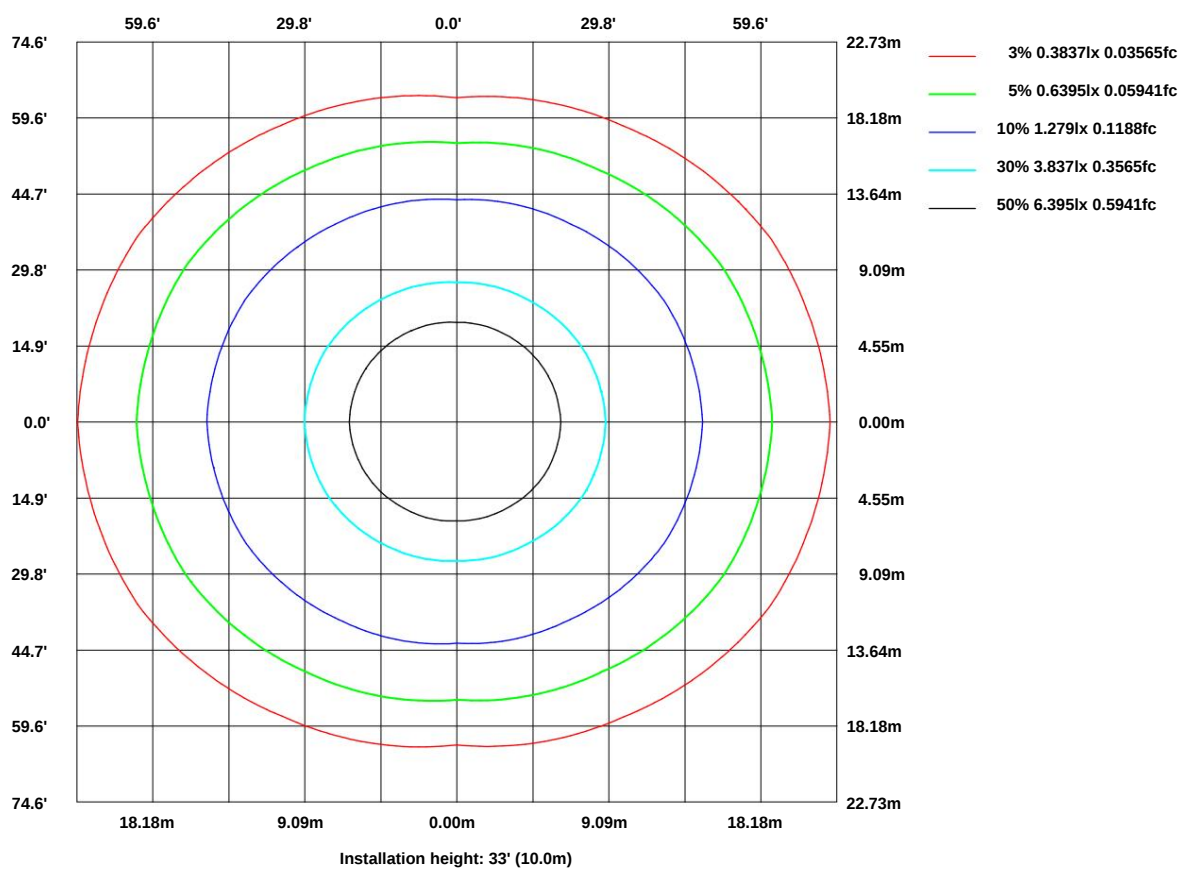
Effective average illuminance diagram of lamps

Beam height (Eavg, Emax): 112.10 degrees ; Diameter : Note: The curve represents the illumination area and average illuminance within the area of the luminaire at different projection distances.

Angle range: 0 degrees - 360 degrees
Angle C interval: 30.0 degrees;
Test speed: Fast;
Ambient temperature: 24.6°C;
Tester;;
Test date: 2025-08-12

γ angle range: 0 degrees - 180 degrees;
γ angle interval: 1.0 degree;
Testing system: EVERFINE GO-2000H_V1 system V2.0.286;
Ambient humidity: 46.0%;
Testing distance: 9.960 meters [K=1.0000] ;
Remarks:

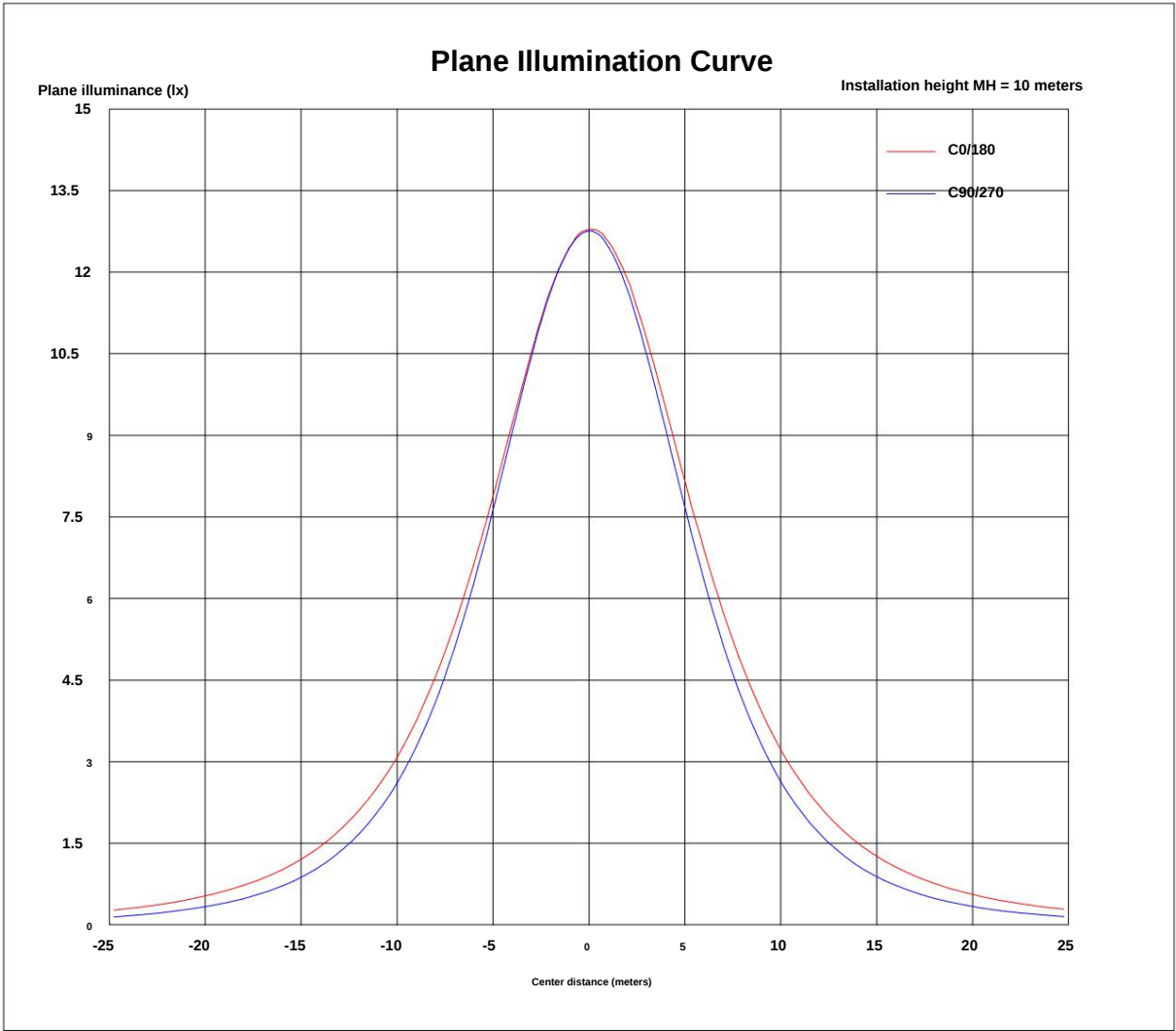
Plane Illumination Curve



Angle range: 0 degrees - 360 degrees
C-angle interval: 30.0 degrees
Test Speed: Fast;
Ambient Temperature: 24.6ÿ;
Tester;;
Test Date: 2025-08-12

ÿ angle range: 0 degrees - 180 degrees
ÿ angle interval: 1.0 degree
Test System: EVERFINE GO-2000H_V1 System V2.0.286
Ambient humidity: 46.0%
Test distance: 9.960 meters [K=1.0000]
Remark:

Plane Illumination Curve



Angle range: 0 degrees - 360 degrees
C-angle interval: 30.0 degrees
Test Speed: Fast;
Ambient Temperature: 24.6°C;
Tester;;
Test Date: 2025-08-12

γ angle range: 0 degrees - 180 degrees
γ angle interval: 1.0 degree
Test System: EVERFINE GO-2000H_V1 System V2.0.286
Ambient humidity: 46.0%
Test distance: 9.960 meters [K=1.0000]
Remark:

Light intensity distribution data table

Table 1Unit: cd

C(YOUR) (YOU) g	0	30	60	90	120	150	180	210	240	270	300	330						
0	1279	1278	1278	1276	1273	1271	1279	1278	1278	1276	1273	1271						
5	1267	1269	1267	1268	1268	1268	1278	1277	1274	1270	1266	1262						
10	1246	1245	1243	1244	1247	1253	1266	1262	1256	1248	1243	1240						
15	1214	1209	1204	1206	1214	1225	1239	1234	1224	1211	1207	1206						
20	1168	1164	1154	1154	1166	1184	1202	1195	1178	1161	1158	1161						
25	1120	1110	1092	1090	1107	1134	1157	1146	1120	1097	1097	1108						
30	1063	1048	1021	1014	1038	1076	1106	1087	1052	1022	1026	1047						
35	1004	983	943	928	960	1012	1046	1023	974	936	948	982						
40	943	914	858	836	876	941	982	952	890	844	865	912						
45	873	841	771	740	789	867	913	878	802	747	777	840						
50	804	765	682	640	698	790	840	800	712	648	688	765						
55	729	688	594	542	609	710	762	721	621	549	599	688						
60	654	609	507	445	520	629	684	639	532	450	511	610						
65	574	531	422	350	433	548	603	557	444	354	426	531						
70	495	453	341	257	350	469	523	477	360	261	345	453						
75	419	378	264	170	272	392	444	400	280	173	266	378						
80	347	306	195	92.1	202	319	371	327	208	93.5	196	308						
85	283	245	136	29.8	142	257	302	263	148	31.9	137	246						
90	229	195	95.3	0.38	99.9	205	246	210	104	0.60	95.5	196						
95	186	157	71.3	0.45	75.5	166	200	169	78.6	1.18	71.2	157						
100	153	128	54.5	0.60	59.1	136	166	139	61.5	1.54	53.4	128						
105	127	103	42.7	0.69	46.9	113	138	115	48.8	1.86	42.2	105						
110	106	84.8	34.1	0.84	37.9	93.5	115	94.9	39.3	1.83	33.5	84.7						
115	88.3	69.6	26.1	0.99	31.1	77.6	96.2	78.6	32.1	1.04	25.9	68.1						
120	73.2	58.3	19.6	1.15	25.5	64.5	80.6	65.3	26.6	1.18	19.3	57.5						
125	60.6	47.0	15.3	1.30	21.1	53.6	67.4	54.1	22.1	1.32	14.8	46.4						
130	49.7	35.6	12.2	1.49	18.0	44.5	56.1	44.9	18.6	1.49	11.3	35.0						
135	40.4	27.2	9.82	1.65	15.2	36.4	46.3	36.9	15.7	1.65	8.98	26.7						
140	32.7	20.8	7.98	1.81	12.6	29.5	37.7	30.1	13.2	1.81	7.25	20.1						
145	26.2	15.8	6.51	1.98	10.4	24.0	30.3	24.2	11.1	1.97	5.89	14.8						
150	20.2	11.8	5.47	2.12	8.89	19.1	23.8	19.2	8.72	2.11	4.99	11.0						
155	15.0	8.80	4.75	2.26	7.28	14.2	18.3	14.9	7.08	2.24	4.38	8.11						
160	10.9	6.42	4.11	2.37	5.73	10.8	13.5	10.9	5.77	2.35	3.86	5.89						
165	7.45	4.70	3.48	2.48	4.60	7.92	9.31	7.55	4.62	2.44	3.32	4.39						
170	4.69	3.65	2.94	2.54	3.67	5.29	5.90	5.24	3.68	2.49	2.86	3.53						
175	2.88	2.81	2.59	2.59	3.00	3.56	3.10	3.57	3.04	2.60	2.60	2.82						
180	2.59	2.60	2.61	2.61	2.61	2.64	2.61	2.62	2.62	2.61	2.61	2.63						

Angle range: 0 degrees - 360 degrees
Angle C interval: 30.0 degrees;
Test speed: Fast;
Ambient temperature: 24.6°C;
Tester;;
Test date: 2025-08-12

γ angle range: 0 degrees - 180 degrees;
γ angle interval: 1.0 degree;
Testing system: EVERFINE GO-2000H_V1 system V2.0.286;
Ambient humidity: 46.0%;
Testing distance: 9.960 meters [K=1.0000] ;
Remarks: