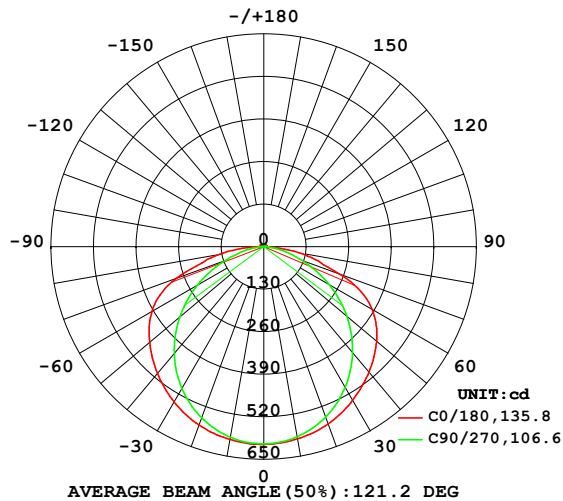


LUMINAIRE PHOTOMETRIC TEST REPORT

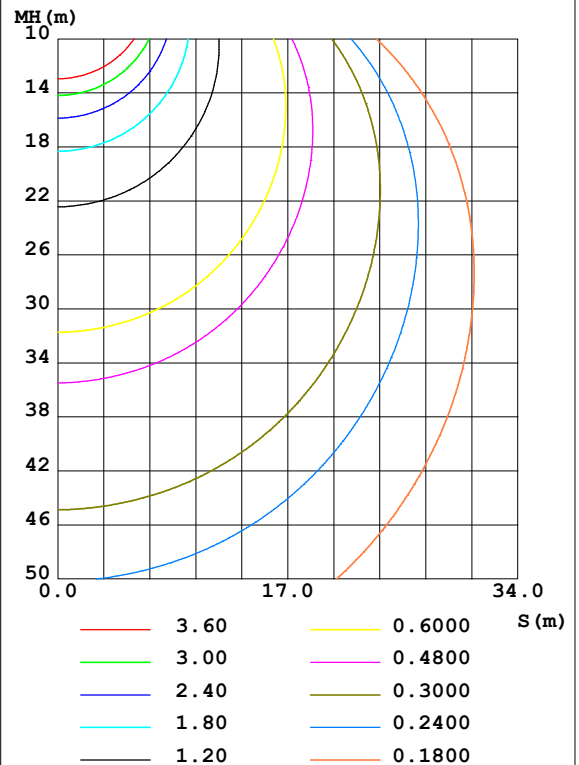
NAME: MQG-LED-310D	TYPE: LED 4000K	WEIGHT: N/A
SPEC.: MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.: 202
MFR.: EVERFINE	SUR.: 0.565*0.575	Shielding Angle: N/A

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 92.40 lm/W
MODEL	3.88.4000K	Imax(cd)	604.3	S/MH(C0/180)	1.35	
NOMINAL POWER(W)	20.71	LOR(%)	100.0	S/MH(C90/270)	1.24	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1913.6	η UP,DN(C0-180)	0.5,48.9	
NOMINAL FLUX(lm)	1913.63	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.5,50.1	
LAMPS INSIDE	1	η up(%)	1.0	CIBSE SHR NOM	1.50	
TEST VOLTAGE(V)	220	η down(%)	99.0	CIBSE SHR MAX	1.50	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity: 65.0%
Test Distance: 8.600m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	596.4	593.1	589.8	591.6	598.2	593.9	591.3	594.1	0- 10	57.10	57.10	2.98,2.98
20	576.3	565.6	553.9	563.3	580.1	567.0	556.4	568.1	10- 20	164.3	221.4	11.6,11.6
30	542.6	521.8	497.4	517.8	548.2	522.9	500.6	525.3	20- 30	251.8	473.3	24.7,24.7
40	500.4	463.8	422.0	456.9	505.6	463.5	425.5	468.1	30- 40	309.4	782.7	40.9,40.9
50	450.6	395.5	331.8	384.9	454.9	392.5	335.4	400.5	40- 50	331.5	1114	58.2,58.2
60	382.4	319.3	230.1	305.4	395.0	314.2	233.3	325.2	50- 60	317.5	1432	74.8,74.8
70	247.2	224.9	125.1	205.4	284.5	217.3	127.3	233.2	60- 70	263.7	1695	88.6,88.6
80	109.5	99.80	42.35	78.95	141.2	87.90	42.66	108.7	70- 80	157.0	1852	96.8,96.8
90	0.2543	1.444	0.1758	0.2431	2.330	0.2014	0.1513	4.280	80- 90	42.33	1895	99,99
100	1.681	1.205	1.171	2.524	1.120	1.727	0.9372	1.035	90-100	0.7478	1895	99,99
110	6.067	3.503	2.058	5.691	2.405	5.819	1.928	3.311	100-110	2.565	1898	99.2,99.2
120	2.205	2.253	2.580	2.354	5.609	2.344	2.639	2.299	110-120	3.790	1902	99.4,99.4
130	2.997	3.249	3.019	3.311	2.717	3.162	3.199	3.171	120-130	2.436	1904	99.5,99.5
140	5.620	3.967	3.352	4.293	3.962	4.225	3.689	4.105	130-140	2.851	1907	99.7,99.7
150	5.890	3.909	3.588	4.787	4.970	4.855	3.994	4.260	140-150	2.749	1910	99.8,99.8
160	5.419	3.377	3.880	5.293	4.988	5.493	4.133	4.157	150-160	2.110	1912	99.9,99.9
170	3.566	3.971	5.252	5.809	4.496	5.933	5.270	4.187	160-170	1.329	1913	100,100
180	3.407	5.432	5.871	5.416	3.417	5.453	5.913	5.418	170-180	0.4754	1914	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 947.91 lm

%lum = 49.5%

%lamp = 49.5%

Conical surface Flux(120deg): 1431.6 lm

%lum = 74.8%

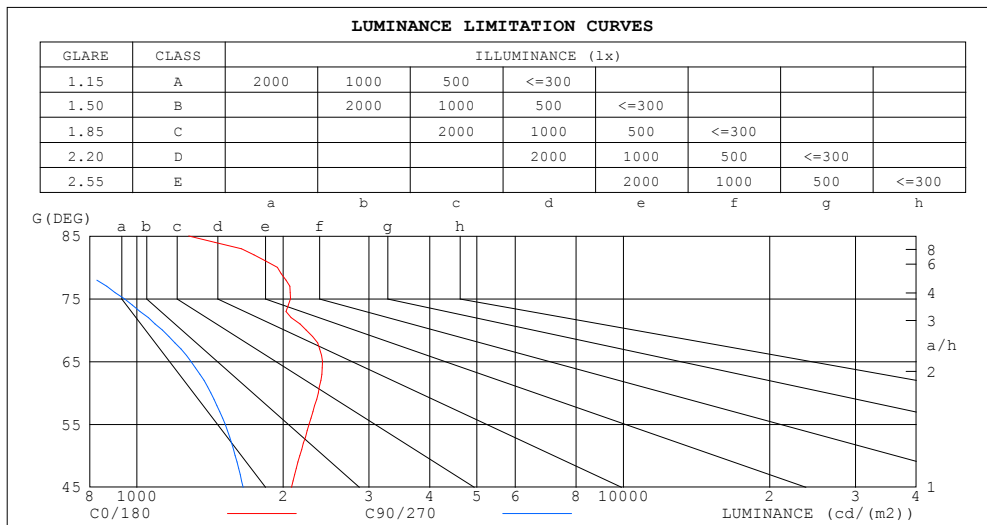
%lamp = 74.8%

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A



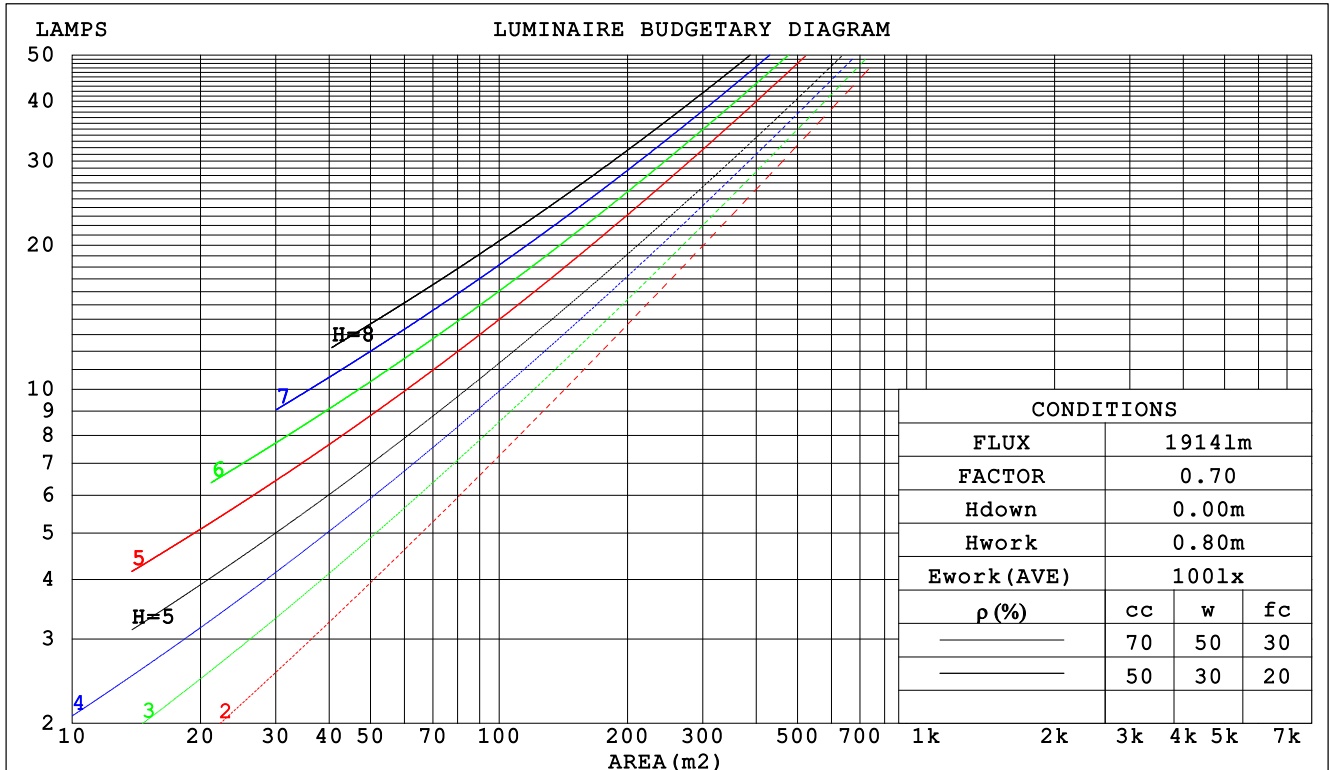
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.01	1.01	1.01	.99
1.0	1.03	.98	.94	1.00	.96	.93	.96	.93	.90	.92	.89	.87	.88	.86	.84	.82
2.0	.89	.82	.76	.87	.80	.75	.83	.78	.73	.80	.75	.71	.77	.73	.69	.67
3.0	.78	.69	.62	.76	.68	.62	.73	.66	.60	.70	.64	.59	.67	.62	.58	.56
4.0	.68	.59	.52	.67	.58	.52	.64	.57	.51	.62	.55	.50	.59	.54	.49	.47
5.0	.61	.52	.45	.60	.51	.44	.57	.50	.44	.55	.49	.43	.53	.47	.43	.40
6.0	.55	.45	.39	.54	.45	.39	.52	.44	.38	.50	.43	.38	.48	.42	.37	.35
7.0	.49	.40	.34	.49	.40	.34	.47	.39	.34	.45	.38	.33	.44	.38	.33	.31
8.0	.45	.36	.30	.44	.36	.30	.43	.35	.30	.41	.35	.30	.40	.34	.29	.27
9.0	.41	.33	.27	.41	.33	.27	.39	.32	.27	.38	.31	.27	.37	.31	.26	.25
10.0	.38	.30	.25	.37	.30	.24	.36	.29	.24	.35	.29	.24	.34	.28	.24	.22



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A

pcc	80%			70%			50%			30%			10%			0	
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
pfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)										
0.0																	
1.0	.325	.185	.058	.317	.181	.057	.303	.174	.056	.291	.168	.054	.279	.162	.052		
2.0	.304	.166	.051	.297	.164	.050	.285	.158	.049	.274	.153	.048	.263	.149	.047		
3.0	.280	.149	.045	.274	.147	.044	.263	.142	.043	.253	.139	.042	.243	.135	.042		
4.0	.257	.134	.039	.252	.132	.039	.242	.128	.038	.233	.125	.038	.225	.122	.037		
5.0	.237	.121	.035	.232	.119	.035	.223	.116	.034	.215	.114	.034	.208	.111	.033		
6.0	.219	.110	.031	.215	.108	.031	.207	.106	.031	.200	.104	.031	.193	.102	.030		
7.0	.203	.100	.028	.199	.099	.028	.193	.097	.028	.186	.095	.028	.180	.093	.027		
8.0	.189	.092	.026	.186	.092	.026	.180	.090	.026	.174	.088	.025	.168	.086	.025		
9.0	.177	.086	.024	.174	.085	.024	.169	.083	.024	.163	.082	.023	.158	.080	.023		
10.0	.166	.080	.022	.164	.079	.022	.158	.078	.022	.154	.076	.022	.149	.075	.022		

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.198	.198	.198	.169	.169	.169	.116	.116	.116	.066	.066	.066	.021	.021	.021	
1.0	.189	.164	.141	.162	.140	.121	.111	.097	.084	.064	.056	.049	.020	.018	.016	
2.0	.182	.140	.104	.155	.120	.090	.107	.083	.063	.061	.048	.037	.020	.016	.012	
3.0	.174	.122	.081	.149	.105	.070	.102	.073	.049	.059	.043	.029	.019	.014	.009	
4.0	.167	.109	.065	.143	.094	.056	.098	.066	.040	.057	.038	.023	.018	.013	.008	
5.0	.159	.099	.054	.137	.085	.047	.094	.060	.033	.055	.035	.020	.018	.011	.006	
6.0	.152	.090	.046	.130	.078	.040	.090	.055	.028	.052	.032	.017	.017	.011	.006	
7.0	.145	.083	.040	.125	.072	.035	.086	.051	.025	.050	.030	.015	.016	.010	.005	
8.0	.138	.078	.036	.119	.067	.031	.082	.047	.022	.048	.028	.013	.016	.009	.004	
9.0	.132	.073	.033	.114	.063	.029	.079	.044	.020	.046	.026	.012	.015	.009	.004	
10.0	.126	.068	.030	.109	.059	.026	.076	.042	.019	.044	.025	.011	.014	.008	.004	

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	16.2	17.7	16.4	17.9	18.2	14.2	15.8	14.5	16.0	16.2
3H	18.1	19.6	18.4	19.8	20.1	15.6	17.0	15.9	17.2	17.5
4H	18.8	20.2	19.1	20.4	20.7	16.0	17.4	16.3	17.6	17.9
6H	19.3	20.6	19.7	20.9	21.2	16.2	17.5	16.6	17.8	18.1
8H	19.5	20.7	19.9	21.0	21.4	16.3	17.5	16.6	17.8	18.2
12H	19.6	20.8	19.9	21.1	21.4	16.3	17.5	16.7	17.8	18.1
4H 2H	16.7	18.1	17.1	18.4	18.6	15.3	16.7	15.6	16.9	17.2
3H	18.9	20.1	19.3	20.4	20.8	16.9	18.1	17.2	18.4	18.7
4H	19.7	20.8	20.1	21.2	21.5	17.5	18.6	17.9	18.9	19.3
6H	20.4	21.4	20.8	21.8	22.1	17.8	18.8	18.3	19.2	19.6
8H	20.6	21.5	21.1	21.9	22.3	17.9	18.8	18.4	19.2	19.6
12H	20.7	21.6	21.2	22.0	22.4	18.0	18.8	18.4	19.2	19.6
8H 4H	20.0	20.9	20.4	21.3	21.7	18.1	19.0	18.5	19.3	19.8
6H	20.8	21.6	21.3	22.0	22.5	18.6	19.4	19.1	19.8	20.3
8H	21.2	21.8	21.6	22.3	22.8	18.8	19.5	19.3	19.9	20.4
12H	21.4	21.9	21.9	22.4	22.9	18.9	19.5	19.4	19.9	20.4
12H 4H	20.0	20.8	20.4	21.2	21.6	18.1	19.0	18.6	19.4	19.8
6H	20.9	21.6	21.4	22.0	22.5	18.8	19.5	19.3	19.9	20.4
8H	21.3	21.8	21.8	22.3	22.8	19.0	19.6	19.5	20.0	20.5
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.2 / - 0.2				
1.5H	+ 0.1 / - 0.2					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.4					+ 0.2 / - 0.5				

CIE Pub.117, 1914 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 2.3$)
Area: 0.324 m²

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

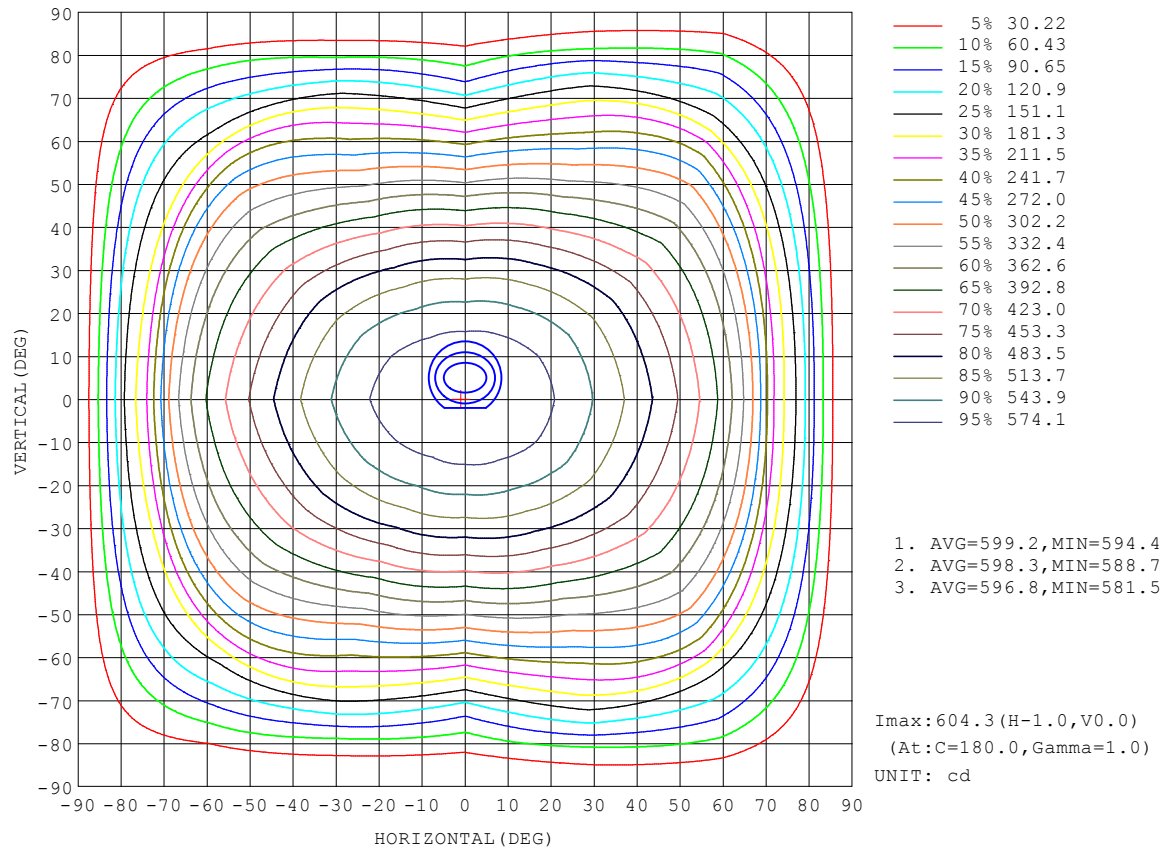
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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

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ISOCANDELA DIAGRAM

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A

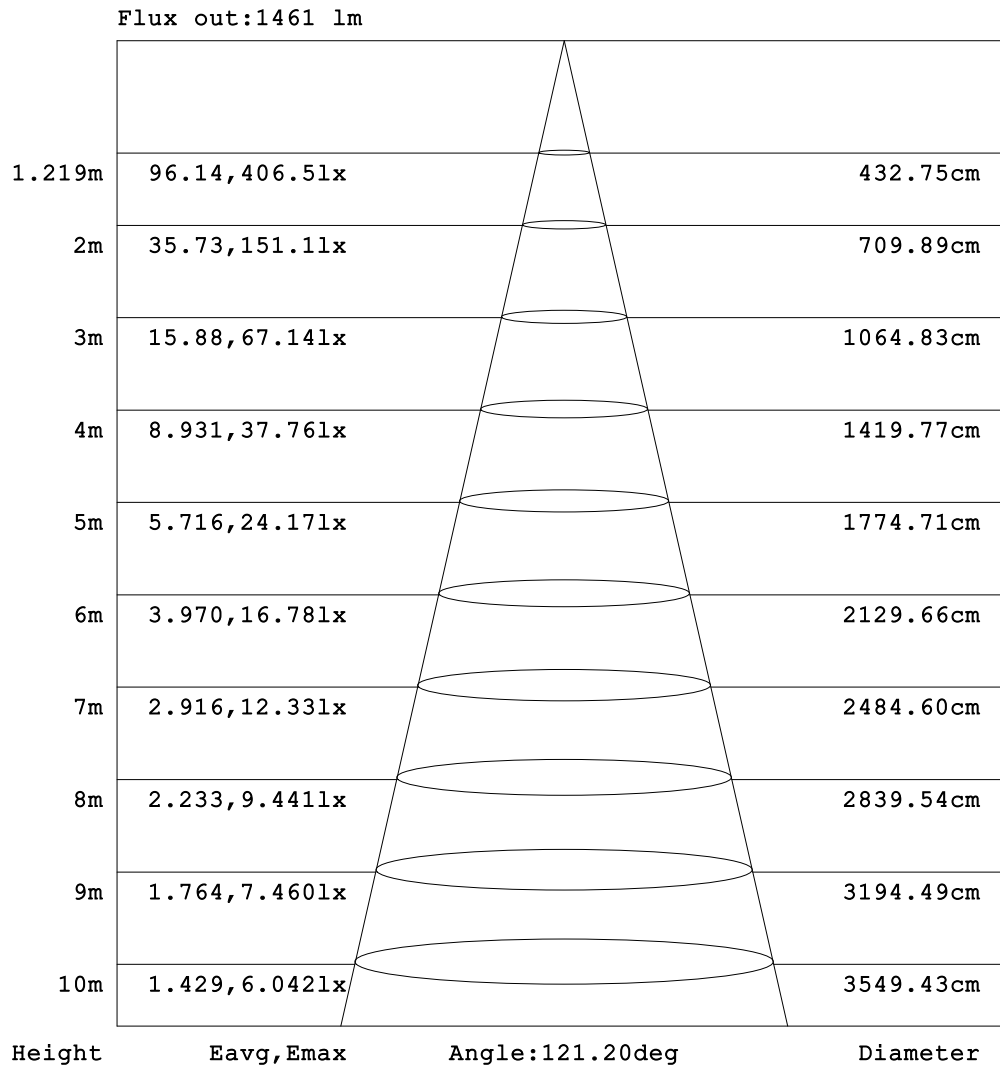


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks:

AAI Figure

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A



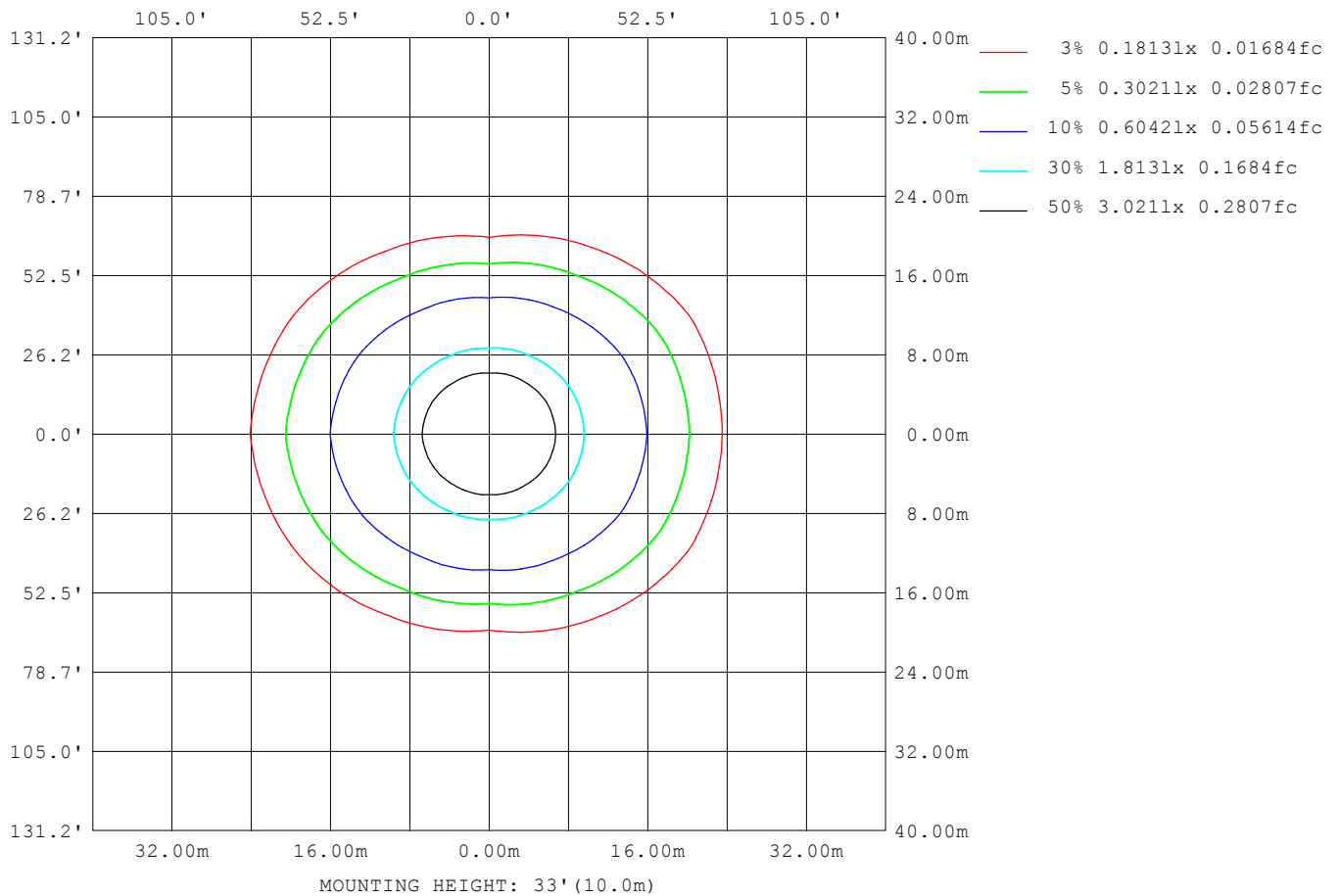
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
 Humidity:65.0%
 Test Distance:8.600m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 γ Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

LED Avg.L Report

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A

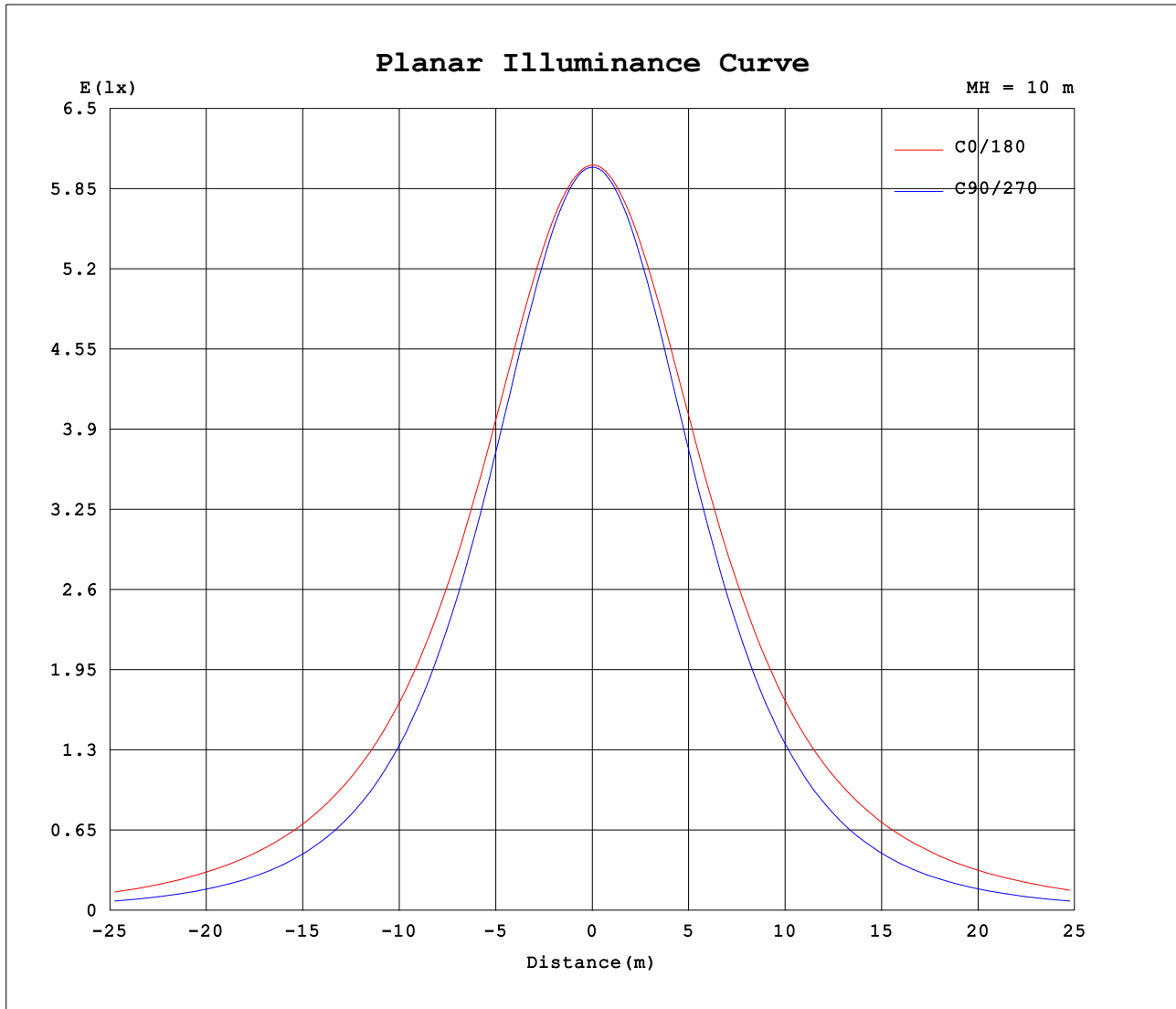
AvgL	cd/m2
L_0~180 (65) av	2482
L_0~180 (75) av	2205
L_0~180 (85) av	1790
L_90~270 (65) av	1304
L_90~270 (75) av	948
L_90~270 (85) av	542
L_45 (65) av	2001
L_45 (75) av	1866
L_45 (85) av	1347

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2025-02-28

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.416
 Humidity: 65.0%
 Test Distance: 8.600m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: MQG-LED-310D	TYPE:LED 4000K	WEIGHT:N/A
SPEC.:MQG-LED-310D	DIM.: 599*599*100mm	SERIAL No.:202
MFR.: EVERFINE	SUR.:0.565*0.575	Shielding Angle:N/A

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	604	604	603	602	602	603	604	604	603	602	602	603							
5	602	601	600	599	599	600	603	602	600	600	600	601							
10	596	595	591	590	590	594	598	596	592	591	593	595							
15	588	585	578	574	576	584	591	586	579	577	581	586							
20	576	571	560	554	557	570	580	573	561	556	563	573							
25	561	554	537	528	533	552	566	556	538	531	541	556							
30	543	533	510	497	505	530	548	535	511	501	515	536							
35	523	509	479	462	473	505	528	511	479	465	484	512							
40	500	483	445	422	437	477	506	483	444	426	450	486							
45	476	455	406	379	397	446	481	453	405	382	412	458							
50	451	425	366	332	356	414	455	422	363	335	372	429							
55	420	394	324	282	312	380	428	388	320	285	330	398							
60	382	357	281	230	268	343	395	353	276	233	288	363							
65	330	314	239	177	223	298	350	308	232	180	244	322							
70	247	255	194	125	178	233	284	248	186	127	200	266							
75	174	172	145	79.1	125	150	196	163	134	80.0	151	189							
80	110	114	86.1	42.3	63.6	94.3	141	105	71.0	42.7	93.7	124							
85	36.1	51.1	34.7	15.2	20.2	29.7	65.0	39.1	24.4	15.5	38.6	61.9							
90	0.25	1.07	1.82	0.18	0.21	0.28	2.33	0.23	0.18	0.15	3.70	4.87							
95	0.79	0.59	0.48	0.71	0.65	0.78	0.50	0.61	0.60	0.25	0.39	0.40							
100	1.68	1.38	1.03	1.17	3.60	1.45	1.12	1.31	2.15	0.94	0.93	1.14							
105	2.38	2.00	2.09	1.66	1.58	1.93	1.91	1.82	2.81	1.63	2.60	1.92							
110	6.07	5.73	1.28	2.06	1.44	9.94	2.41	10.2	1.48	1.93	1.30	5.32							
115	6.78	3.95	1.67	2.34	1.66	3.40	12.4	5.11	1.82	2.30	1.63	4.83							
120	2.21	2.09	2.42	2.58	2.29	2.42	5.61	2.43	2.26	2.64	2.62	1.97							
125	2.29	2.24	2.88	2.81	3.11	2.37	2.81	2.28	2.96	2.91	3.09	2.03							
130	3.00	3.11	3.38	3.02	3.52	3.10	2.72	2.70	3.63	3.20	3.60	2.74							
135	4.57	4.15	3.54	3.19	3.84	3.64	3.04	3.64	4.01	3.46	3.81	3.91							
140	5.62	4.15	3.79	3.35	4.14	4.45	3.96	4.18	4.27	3.69	3.93	4.28							
145	6.07	4.38	3.70	3.48	4.35	4.88	4.44	4.79	4.47	3.84	3.99	4.59							
150	5.89	4.36	3.46	3.59	4.61	4.96	4.97	5.01	4.70	3.99	3.93	4.59							
155	5.65	4.13	3.28	3.66	5.07	5.13	4.95	5.30	5.16	4.06	3.85	4.65							
160	5.42	3.57	3.18	3.88	5.49	5.09	4.99	5.41	5.58	4.13	3.83	4.48							
165	4.61	3.14	3.72	4.71	5.84	5.47	4.80	5.47	5.99	4.75	3.99	3.92							
170	3.57	3.38	4.56	5.25	5.79	5.83	4.50	5.82	6.05	5.27	4.63	3.74							
175	3.41	4.18	5.43	5.56	5.77	5.54	3.59	5.85	5.90	5.63	5.40	4.22							
180	3.41	5.02	5.84	5.87	5.77	5.06	3.42	5.06	5.85	5.91	5.82	5.02							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2025-02-28

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.416
Humidity:65.0%
Test Distance:8.600m [K=1.0000]
Remarks: