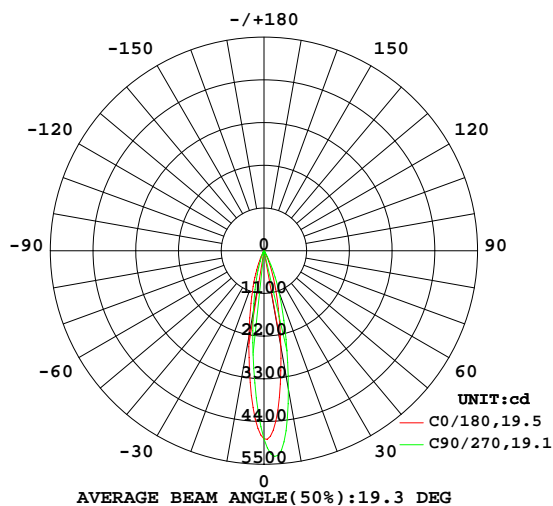


LUMINAIRE PHOTOMETRIC TEST REPORT

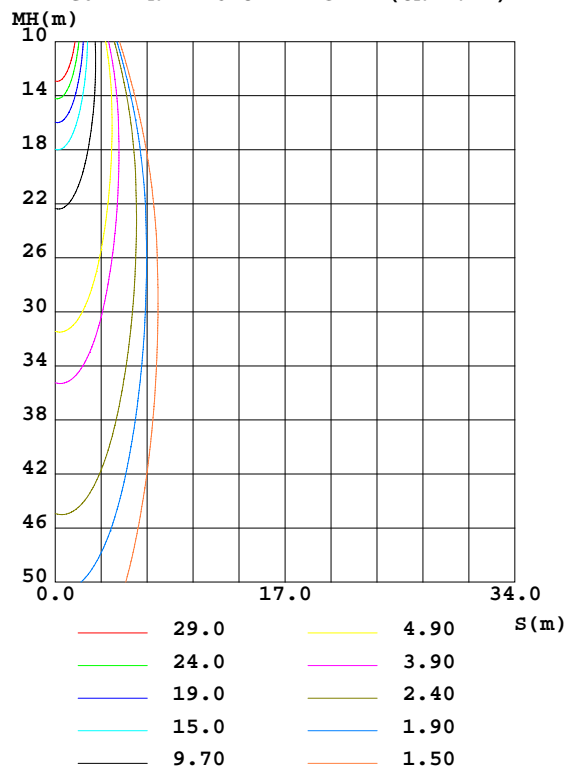
NAME: DL3198 2700K RA90 15D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 39.49 lm/W			
MODEL DL3198 2700K RA90 15D		Imax(cd)	5304	S/MH(C0/180)	0.32
NOMINAL POWER(W)	22	LOR(%)	100.0	S/MH(C90/270)	0.24
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	887.46	η UP,DN(C0-180)	0.4,62.1
NOMINAL FLUX(lm)	887.461	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.4,37.1
LAMPS INSIDE	1	η up(%)	0.8	CIBSE SHR NOM	0.00
TEST VOLTAGE(V)	220.1	η down(%)	99.2	CIBSE SHR MAX	1.00

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: liangwei
 Test Date: 08 March 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.650m [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	2501	3197	3629	2911	2228	1774	1585	2132	0- 10	337.4	337.4	38,38
20	648.6	960.4	1129	859.2	624.5	391.5	295.9	455.5	10- 20	379.6	717.0	80.8,80.8
30	72.90	112.2	144.0	97.93	73.61	48.82	39.57	54.46	20- 30	130.0	847.0	95.4,95.4
40	15.42	16.98	19.94	17.88	15.42	11.32	9.713	12.51	30- 40	21.75	868.7	97.9,97.9
50	5.419	5.847	6.649	6.684	5.838	4.515	3.860	4.497	40- 50	6.881	875.6	98.7,98.7
60	2.125	2.531	3.051	3.062	2.511	1.920	1.586	1.828	50- 60	3.292	878.9	99,99
70	0.1972	0.4968	0.8532	0.6431	0.4078	0.1769	0.0319	0.1237	60- 70	1.251	880.2	99.2,99.2
80	0.0107	0.0178	0.0321	0.0214	0	0	0	0	70- 80	0.0836	880.2	99.2,99.2
90	0	0	0.0000	0	0	0	0	0	80- 90	0.0021	880.2	99.2,99.2
100	0	0	0	0	0	0	0	0	90-100	0.0000	880.2	99.2,99.2
110	0.0000	0	0.0036	0	0	0	0.0000	0	100-110	0.0002	880.2	99.2,99.2
120	0.0391	0.0107	0.0142	0.0213	0.0250	0.0250	0.0393	0.0285	110-120	0.0081	880.3	99.2,99.2
130	0.2380	0.1456	0.1138	0.1741	0.1822	0.2750	0.3535	0.2321	120-130	0.0768	880.3	99.2,99.2
140	1.319	0.9171	0.7677	1.074	1.077	1.462	1.691	1.295	130-140	0.4550	880.8	99.2,99.2
150	4.351	3.515	3.176	4.016	3.486	4.177	4.576	3.789	140-150	1.459	882.2	99.4,99.4
160	7.935	7.332	7.232	7.675	5.706	5.804	6.574	5.744	150-160	2.492	884.7	99.7,99.7
170	8.821	8.415	8.692	8.632	6.196	5.942	5.818	5.461	160-170	2.003	886.7	99.9,99.9
180	7.781	8.397	7.973	7.970	7.792	8.400	7.970	7.959	170-180	0.7175	887.5	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 872.89 lm

%lum = 98.4%

%lamp = 98.4%

Conical surface Flux(120deg): 878.91 lm

%lum = 99.0%

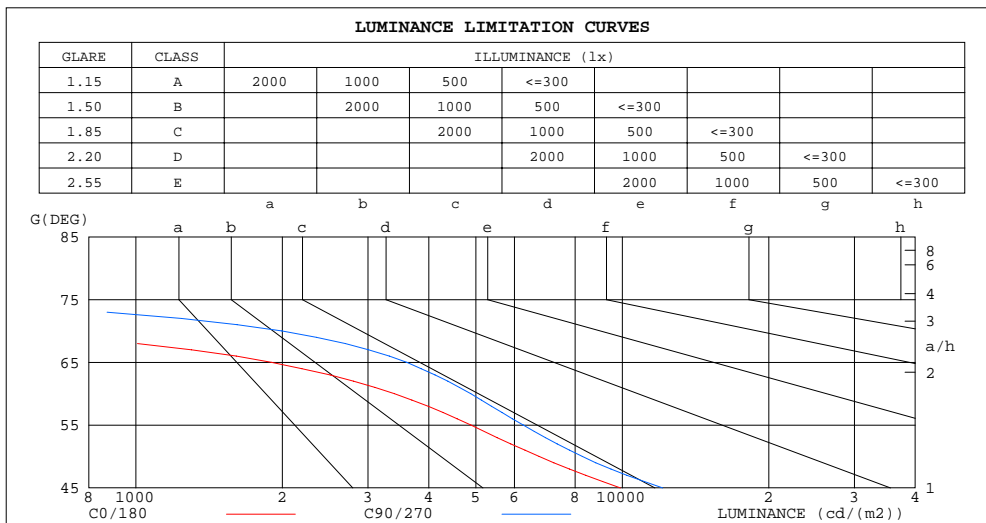
%lamp = 99.0%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:liangwei
Test Date:08 March 2019

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.650m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

NAME: DL3198 2700K RA90 15D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	33	132
80	49	148
75	89	246
70	461	1996
65	1899	3604
60	3400	4881
55	4882	6259
50	6745	8275
45	9907	12102

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: liangwei
Test Date: 08 March 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 7.650m [K=1.0000]
Remarks:

WEC AND CCEC

NAME: DL3198 2700K RA90 15D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0	
ρw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0	
ρfc	20%			20%			20%			20%			20%			0	
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)										
0.0																	
1.0	.135	.077	.024	.128	.073	.023	.115	.066	.021	.103	.060	.019	.093	.054	.017		
2.0	.125	.068	.021	.119	.066	.020	.109	.060	.019	.099	.055	.017	.090	.051	.016		
3.0	.116	.062	.019	.111	.060	.018	.103	.056	.017	.094	.052	.016	.087	.048	.015		
4.0	.109	.056	.017	.105	.055	.016	.097	.052	.015	.090	.048	.015	.084	.045	.014		
5.0	.102	.052	.015	.099	.051	.015	.092	.048	.014	.086	.046	.014	.081	.043	.013		
6.0	.097	.048	.014	.094	.047	.014	.088	.045	.013	.083	.043	.013	.078	.041	.012		
7.0	.092	.045	.013	.089	.044	.013	.084	.043	.012	.080	.041	.012	.075	.039	.012		
8.0	.087	.043	.012	.085	.042	.012	.081	.040	.012	.077	.039	.011	.073	.037	.011		
9.0	.083	.040	.011	.081	.040	.011	.078	.038	.011	.074	.037	.011	.071	.036	.010		
10.0	.080	.038	.011	.078	.038	.011	.075	.037	.010	.072	.036	.010	.068	.034	.010		

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	.197	.197	.197	.168	.168	.168	.115	.115	.115	.066	.066	.066	.021	.021	.021		
1.0	.174	.164	.154	.149	.141	.133	.102	.097	.092	.059	.056	.053	.019	.018	.017		
2.0	.156	.139	.124	.134	.120	.108	.092	.083	.075	.053	.048	.044	.017	.016	.014		
3.0	.141	.120	.102	.121	.103	.089	.083	.072	.062	.048	.042	.037	.015	.014	.012		
4.0	.129	.104	.086	.110	.090	.074	.076	.063	.052	.044	.037	.031	.014	.012	.010		
5.0	.118	.092	.073	.101	.079	.063	.070	.056	.045	.040	.033	.026	.013	.011	.009		
6.0	.109	.082	.062	.094	.071	.054	.065	.050	.038	.038	.029	.023	.012	.010	.008		
7.0	.101	.074	.054	.087	.064	.047	.060	.045	.033	.035	.026	.020	.011	.009	.007		
8.0	.095	.067	.048	.082	.058	.042	.056	.041	.029	.033	.024	.018	.011	.008	.006		
9.0	.089	.061	.042	.077	.053	.037	.053	.037	.026	.031	.022	.016	.010	.007	.005		
10.0	.084	.056	.038	.073	.049	.033	.050	.034	.024	.029	.020	.014	.010	.007	.005		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:liangwei
Test Date:08 March 2019

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.650m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

NAME: DL3198 2700K RA90 15D						TYPE:			WEIGHT:		
SPEC.:						DIM.:			SERIAL No.:		
MFR.: VJC Lighting						SUR.:			Shielding Angle:		
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	10.1	10.7	10.3	10.9	11.0	11.7	12.3	11.9	12.5	12.7	
3H	10.0	10.6	10.2	10.8	11.0	11.7	12.3	11.9	12.5	12.7	
4H	9.9	10.5	10.2	10.7	10.9	11.6	12.2	11.9	12.4	12.6	
6H	9.8	10.4	10.1	10.6	10.9	11.5	12.1	11.8	12.3	12.5	
8H	9.8	10.3	10.1	10.6	10.8	11.5	12.0	11.8	12.2	12.5	
12H	9.7	10.2	10.1	10.5	10.8	11.4	11.9	11.8	12.2	12.5	
4H 2H	10.0	10.6	10.3	10.8	11.0	11.6	12.1	11.9	12.4	12.6	
3H	9.9	10.4	10.2	10.7	10.9	11.5	12.0	11.9	12.3	12.6	
4H	9.8	10.3	10.1	10.6	10.9	11.4	11.9	11.8	12.2	12.5	
6H	9.7	10.1	10.1	10.4	10.8	11.3	11.7	11.7	12.1	12.4	
8H	9.6	10.0	10.0	10.4	10.8	11.3	11.7	11.7	12.0	12.4	
12H	9.6	9.9	10.0	10.3	10.7	11.2	11.6	11.6	12.0	12.4	
8H 4H	9.6	10.0	10.0	10.4	10.8	11.3	11.7	11.7	12.0	12.4	
6H	9.5	9.8	10.0	10.2	10.7	11.2	11.5	11.6	11.9	12.3	
8H	9.5	9.7	9.9	10.2	10.6	11.1	11.4	11.6	11.8	12.3	
12H	9.4	9.6	9.9	10.1	10.6	11.0	11.3	11.5	11.7	12.2	
12H 4H	9.6	9.9	10.0	10.3	10.7	11.2	11.6	11.6	12.0	12.4	
6H	9.5	9.7	9.9	10.2	10.6	11.1	11.4	11.6	11.8	12.3	
8H	9.4	9.6	9.9	10.1	10.6	11.0	11.3	11.5	11.7	12.2	
Variations with the observer position at spacings:											
S = 1.0H	+ 2.2 / - 4.4					+ 3.0 / - 4.0					
1.5H	+ 3.5 / - 2.6					+ 4.6 / - 3.1					
2.0H	+ 3.1 / - 3.1					+ 3.5 / - 2.9					

CIE Pub.117, 887.5 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.4$)

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature: 25.3DEG

Operators: liangwei

Test Date: 08 March 2019

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362

Humidity: 65.0%

Test Distance: 7.650m [K=1.0000]

Remarks:

UTILIZATION FACTORS TABLE

NAME: DL3198 2700K RA90 15D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

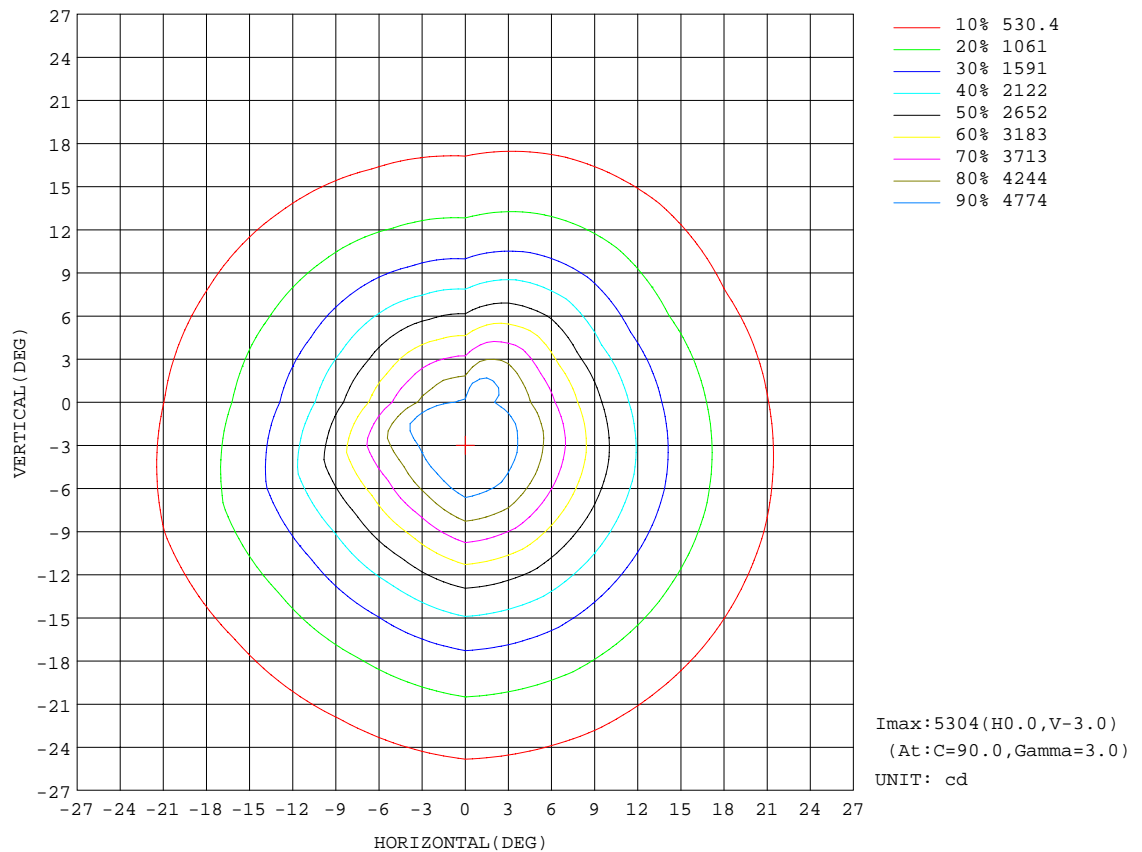
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	90	84	81	90	84	81	89	84	81	78
0.80	97	92	89	97	92	88	95	91	88	85
1.00	101	96	93	100	96	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	96	92
1.50	107	103	100	106	102	99	104	101	98	94
2.00	109	106	103	108	104	102	105	102	100	95
2.50	111	107	105	109	106	104	106	104	102	96
3.00	112	109	107	110	108	106	107	105	103	97
4.00	114	112	110	112	110	108	108	107	105	98
5.00	115	113	112	113	111	110	109	108	107	99
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004										
Suspended										
SHRNOM = 1.25										

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:liangwei
Test Date:08 March 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.650m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: DL3198 2700K RA90 15D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

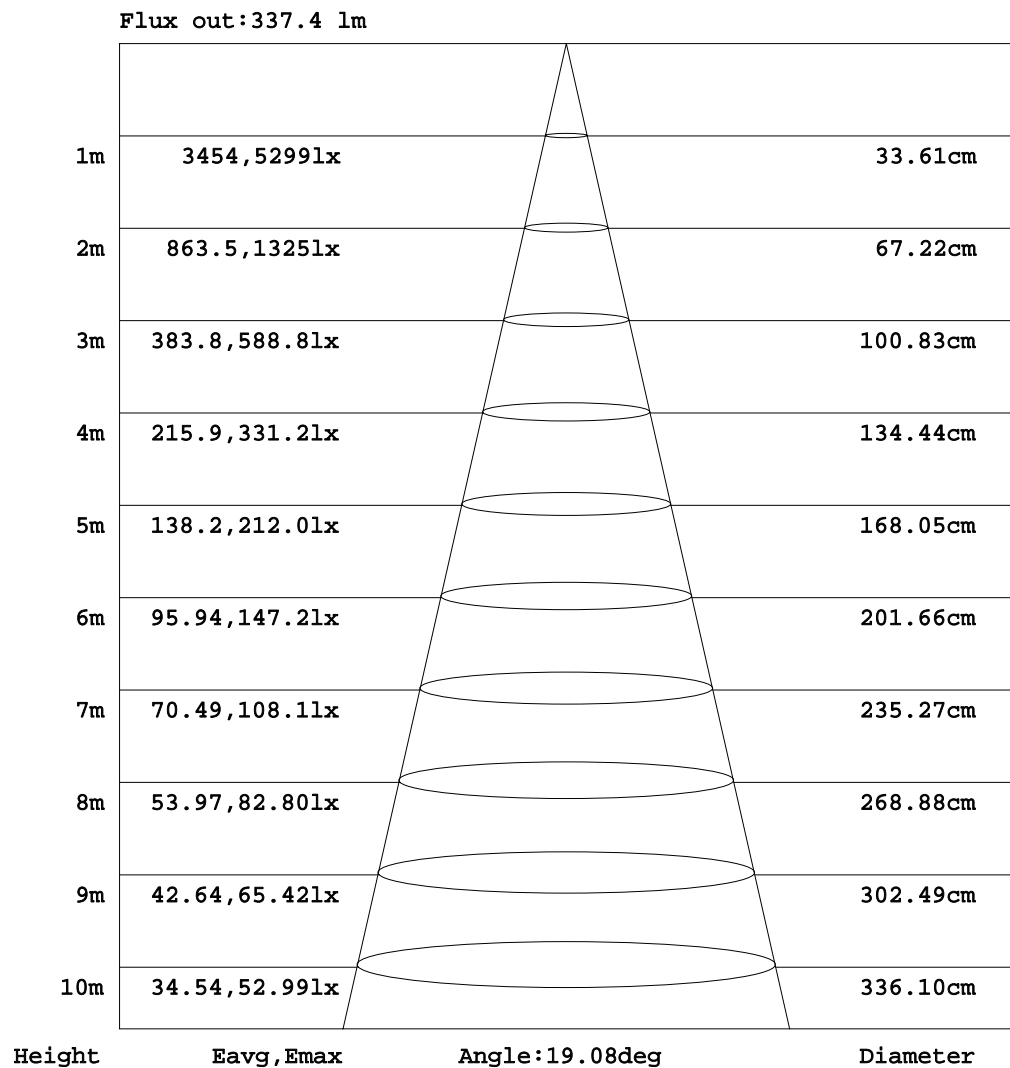


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:liangwei
Test Date:08 March 2019

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.650m [K=1.0000]
Remarks:

AAI Figure

NAME: DL3198 2700K RA90 15D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

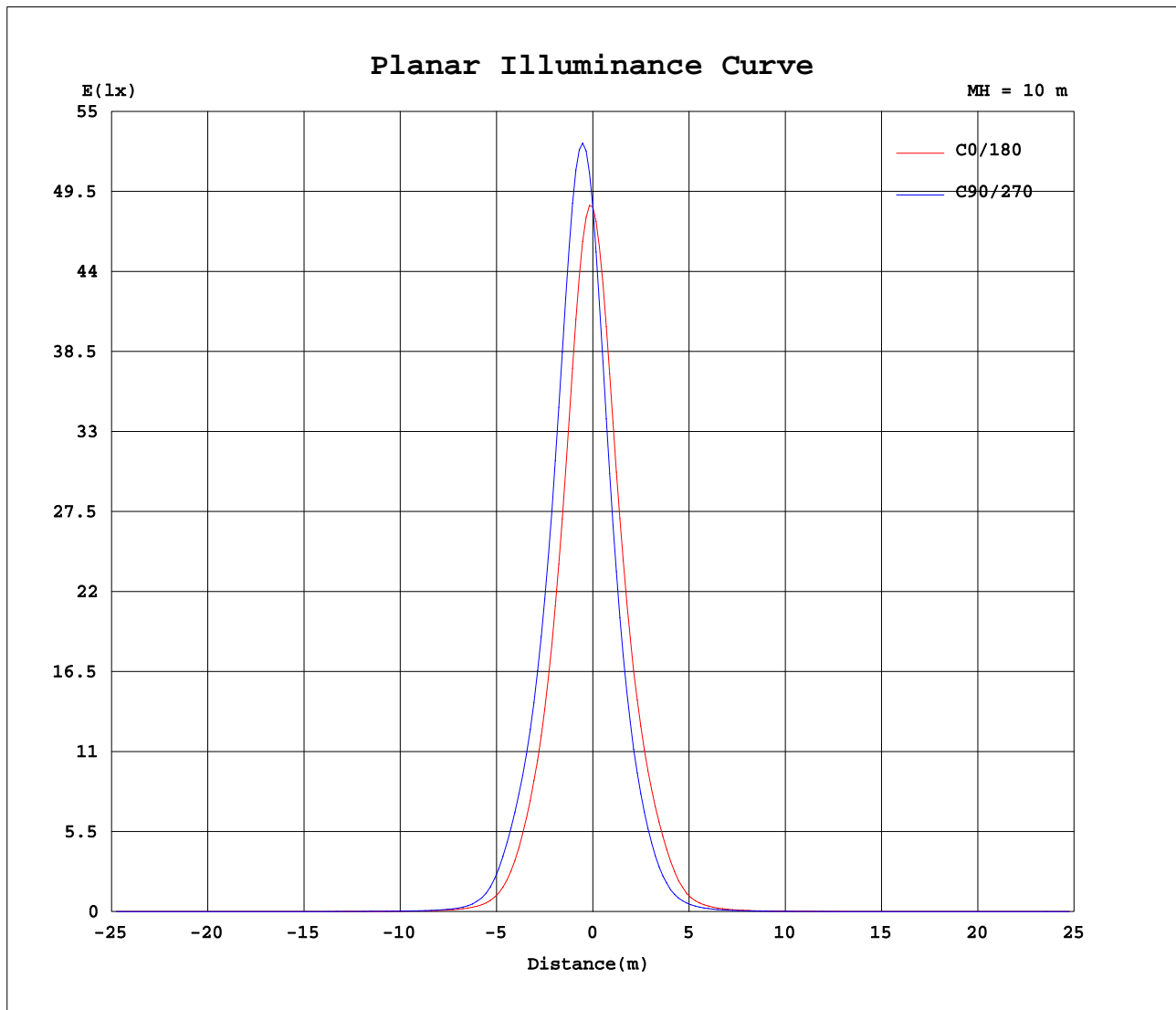


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: liangwei
 Test Date: 08 March 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 7.650m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: liangwei
Test Date: 08 March 2019

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 7.650m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

NAME: DL3198 2700K RA90 15D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	4844	4834	4840	4827	4846	5146	5254	5268	4844	4834	4840	4827	4846	5146	5254	5268			
5	4117	4503	4792	5046	5156	4860	4622	4564	3740	3421	3243	3080	3047	3546	3869	3933			
10	2501	2892	3197	3506	3629	3176	2911	2848	2228	1941	1774	1630	1585	1897	2132	2197			
15	1340	1602	1804	2007	2098	1807	1637	1591	1236	1043	904	796	760	934	1061	1113			
20	649	822	960	1080	1129	961	859	834	625	489	392	320	296	382	455	491			
25	227	316	392	473	512	392	324	322	227	165	131	111	100	128	149	160			
30	72.9	91.7	112	131	144	110	97.9	96.5	73.6	58.6	48.8	42.1	39.6	48.7	54.5	55.7			
35	30.8	35.0	36.9	41.1	45.5	39.2	36.8	37.4	30.7	25.3	21.7	19.2	18.3	22.1	24.4	24.7			
40	15.4	16.8	17.0	18.3	19.9	18.3	17.9	18.0	15.4	13.0	11.3	10.2	9.71	11.4	12.5	12.7			
45	8.76	9.33	9.36	9.94	10.7	10.3	10.3	10.3	9.00	7.67	6.78	6.15	5.84	6.55	7.16	7.34			
50	5.42	5.76	5.85	6.18	6.65	6.58	6.68	6.57	5.84	5.06	4.52	4.12	3.86	4.20	4.50	4.61			
55	3.50	3.78	3.89	4.16	4.49	4.51	4.58	4.43	3.93	3.43	3.07	2.79	2.61	2.81	2.96	2.99			
60	2.12	2.37	2.53	2.78	3.05	3.06	3.06	2.89	2.51	2.17	1.92	1.73	1.59	1.77	1.83	1.78			
65	1.00	1.24	1.45	1.69	1.90	1.82	1.80	1.66	1.37	1.09	0.91	0.78	0.66	0.84	0.86	0.80			
70	0.20	0.32	0.50	0.69	0.85	0.70	0.64	0.60	0.41	0.28	0.18	0.11	0.03	0.11	0.12	0.10			
75	0.03	0.01	0.04	0.03	0.08	0.02	0.05	0.02	0.02	0.04	0.00	0.01	0.00	0.03	0.00	0.02			
80	0.01	0.00	0.02	0.00	0.03	0.00	0.02	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00			
85	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.01	0.02	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.00			
120	0.04	0.04	0.01	0.03	0.01	0.03	0.02	0.03	0.03	0.01	0.02	0.01	0.04	0.01	0.03	0.01			
125	0.09	0.08	0.05	0.06	0.05	0.07	0.06	0.08	0.07	0.05	0.09	0.09	0.11	0.07	0.07	0.06			
130	0.24	0.20	0.15	0.14	0.11	0.16	0.17	0.20	0.18	0.21	0.28	0.31	0.35	0.25	0.23	0.21			
135	0.60	0.49	0.39	0.35	0.31	0.41	0.45	0.51	0.49	0.59	0.71	0.79	0.85	0.67	0.61	0.57			
140	1.32	1.08	0.92	0.82	0.77	0.95	1.07	1.14	1.08	1.28	1.46	1.60	1.69	1.43	1.29	1.24			
145	2.54	2.15	1.91	1.71	1.66	1.98	2.23	2.32	2.07	2.38	2.64	2.86	2.97	2.58	2.35	2.27			
150	4.35	3.83	3.51	3.25	3.18	3.67	4.02	4.12	3.49	3.85	4.18	4.46	4.58	4.13	3.79	3.70			
155	6.41	5.86	5.55	5.33	5.26	5.80	6.06	6.15	4.91	5.12	5.45	5.75	5.86	5.52	5.17	5.00			
160	7.93	7.44	7.33	7.17	7.23	7.54	7.67	7.65	5.71	5.65	5.80	6.14	6.57	6.09	5.74	5.57			
165	8.77	8.27	8.26	8.23	8.38	8.43	8.47	8.70	6.03	5.85	5.74	5.94	6.24	5.75	5.53	5.61			
170	8.82	8.69	8.41	8.75	8.69	8.75	8.63	9.19	6.20	6.31	5.94	6.05	5.82	5.60	5.46	5.84			
175	8.55	8.71	9.06	8.76	8.63	8.66	9.07	8.58	6.55	6.81	6.89	6.74	6.23	6.23	6.26	6.21			
180	7.78	7.94	8.40	7.84	7.97	7.65	7.97	7.33	7.79	7.91	8.40	7.81	7.97	7.62	7.96	7.31			

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: HIGH

Temperature:25.3DEG

Operators:liangwei

Test Date:08 March 2019

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362

Humidity:65.0%

Test Distance:7.650m [K=1.0000]

Remarks: