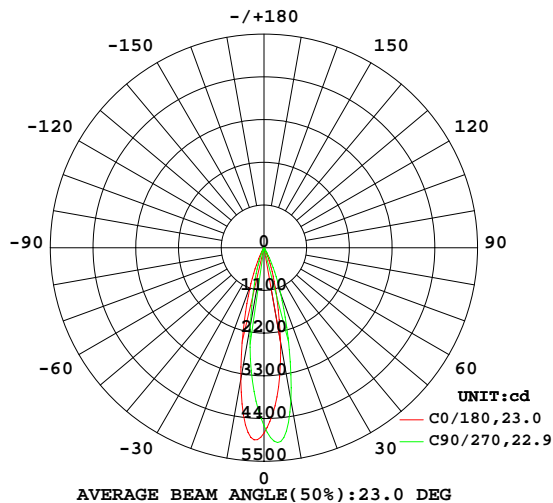


LUMINAIRE PHOTOMETRIC TEST REPORT

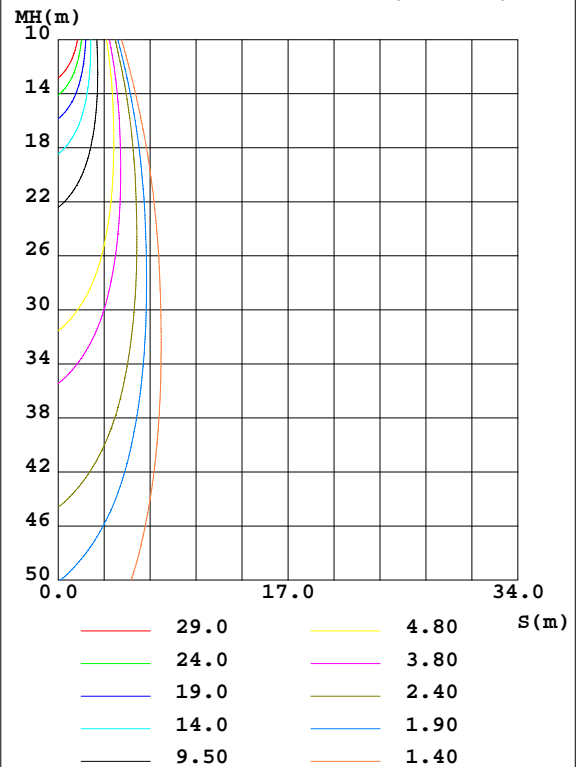
NAME: DL3198 2700K RA90 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 45.02 lm/W			
MODEL DL3198 2700K RA90 24D		Imax(cd)	5116	S/MH(C0/180)	0.45
NOMINAL POWER(W)	22	LOR(%)	100.0	S/MH(C90/270)	0.31
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	1015.9	η UP,DN(C0-180)	0.4,58.6
NOMINAL FLUX(lm)	1015.95	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.4,40.6
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	2452	3178	3987	3679	3443	2605	2021	2239	0- 10	363.8	363.8	35.8,35.8
20	539.0	873.7	1258	1109	989.2	631.1	384.8	430.6	10- 20	448.9	812.7	80,80
30	70.61	118.8	179.7	130.8	118.1	72.81	49.37	55.86	20- 30	152.0	964.8	95,95
40	16.11	23.27	28.72	22.30	23.16	17.04	12.49	13.32	30- 40	27.91	992.7	97.7,97.7
50	5.612	7.901	9.366	7.936	8.403	6.407	4.895	5.020	40- 50	8.958	1002	98.6,98.6
60	2.285	3.229	4.102	3.611	3.785	2.546	1.795	1.984	50- 60	4.157	1006	99,99
70	0.2117	0.6858	1.206	0.9355	0.7025	0.1802	0.0427	0.0675	60- 70	1.582	1007	99.2,99.2
80	0.0285	0.0322	0.0499	0.0428	0.0070	0	0.0070	0	70- 80	0.1333	1008	99.2,99.2
90	0	0	0.0036	0	0	0	0	0	80- 90	0.0055	1008	99.2,99.2
100	0	0	0	0	0	0	0	0	90-100	0.0000	1008	99.2,99.2
110	0.0143	0	0.0036	0	0	0.0001	0.0143	0.0036	100-110	0.0020	1008	99.2,99.2
120	0.0676	0.0463	0.0496	0.0248	0.0321	0.0499	0.0678	0.0393	110-120	0.0201	1008	99.2,99.2
130	0.4050	0.2451	0.1670	0.1706	0.1749	0.2892	0.4247	0.3285	120-130	0.1071	1008	99.2,99.2
140	2.083	1.415	0.9846	1.102	0.9920	1.459	1.940	1.691	130-140	0.5546	1008	99.2,99.2
150	6.127	4.792	3.856	4.184	3.451	4.288	5.089	4.647	140-150	1.738	1010	99.4,99.4
160	9.819	8.878	8.393	8.432	6.341	6.557	7.540	6.599	150-160	2.866	1013	99.7,99.7
170	10.20	9.650	9.952	10.03	7.189	6.999	6.844	6.451	160-170	2.321	1015	99.9,99.9
180	8.596	9.355	9.227	9.351	8.643	9.398	9.255	9.362	170-180	0.8285	1016	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 998.1 lm

%lum = 98.2%

%lamp = 98.2%

Conical surface Flux(120deg): 1005.8 lm

%lum = 99.0%

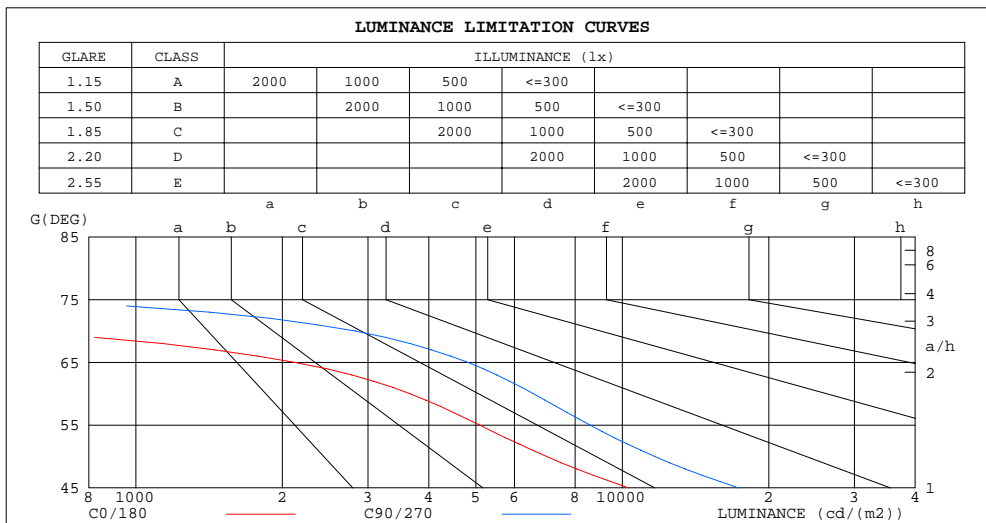
%lamp = 99.0%

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 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	163	197
80	131	230
75	154	534
70	495	2821
65	2115	4813
60	3656	6564
55	5086	8581
50	6984	11656
45	10298	17335

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 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

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	.137	.078	.025	.130	.074	.024	.117	.067	.021	.105	.061	.019	.094	.055	.018		
2.0	.127	.069	.021	.121	.067	.021	.110	.061	.019	.101	.056	.018	.091	.052	.016		
3.0	.118	.063	.019	.113	.061	.018	.104	.057	.017	.096	.053	.016	.088	.049	.015		
4.0	.111	.057	.017	.107	.056	.016	.099	.052	.016	.092	.049	.015	.085	.046	.014		
5.0	.104	.053	.015	.101	.052	.015	.094	.049	.014	.088	.047	.014	.083	.044	.013		
6.0	.098	.049	.014	.095	.048	.014	.090	.046	.013	.085	.044	.013	.080	.042	.012		
7.0	.093	.046	.013	.091	.045	.013	.086	.043	.013	.081	.042	.012	.077	.040	.012		
8.0	.089	.044	.012	.087	.043	.012	.082	.041	.012	.078	.040	.011	.075	.038	.011		
9.0	.085	.041	.011	.083	.040	.011	.079	.039	.011	.076	.038	.011	.072	.037	.011		
10.0	.081	.039	.011	.080	.038	.011	.076	.037	.011	.073	.036	.010	.070	.035	.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	.175	.164	.154	.149	.141	.133	.102	.097	.092	.059	.056	.053	.019	.018	.017	
2.0	.157	.139	.124	.134	.120	.108	.092	.083	.075	.053	.048	.044	.017	.016	.014	
3.0	.142	.120	.102	.121	.103	.089	.083	.072	.062	.048	.042	.037	.015	.014	.012	
4.0	.129	.104	.085	.111	.090	.074	.076	.063	.052	.044	.037	.031	.014	.012	.010	
5.0	.119	.092	.072	.102	.080	.063	.070	.056	.045	.041	.033	.026	.013	.011	.009	
6.0	.110	.082	.062	.094	.071	.054	.065	.050	.038	.038	.029	.023	.012	.010	.008	
7.0	.102	.074	.054	.088	.064	.047	.061	.045	.033	.035	.026	.020	.011	.009	.007	
8.0	.096	.067	.048	.082	.058	.041	.057	.041	.029	.033	.024	.018	.011	.008	.006	
9.0	.090	.062	.042	.078	.053	.037	.054	.038	.026	.031	.022	.016	.010	.007	.005	
10.0	.085	.057	.038	.073	.049	.033	.051	.035	.023	.030	.021	.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 24D						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						10.0	10.6	10.2	10.8	11.0	13.1
3H						9.9	10.5	10.1	10.7	10.9	13.0
4H						9.8	10.4	10.1	10.6	10.8	13.0
6H						9.7	10.3	10.0	10.5	10.8	12.9
8H						9.7	10.2	10.0	10.5	10.7	12.8
12H						9.6	10.1	10.0	10.4	10.7	12.8
4H 2H						10.0	10.5	10.2	10.8	11.0	12.9
3H						9.9	10.4	10.2	10.6	10.9	12.9
4H						9.8	10.2	10.1	10.5	10.8	12.8
6H						9.7	10.1	10.0	10.4	10.8	12.7
8H						9.6	10.0	10.0	10.3	10.7	12.6
12H						9.5	9.9	10.0	10.3	10.7	12.6
8H 4H						9.6	10.0	10.0	10.3	10.7	12.6
6H						9.5	9.8	9.9	10.2	10.6	12.5
8H						9.4	9.7	9.9	10.1	10.6	12.4
12H						9.4	9.6	9.8	10.1	10.5	12.4
12H 4H						9.5	9.9	10.0	10.3	10.7	12.6
6H						9.4	9.7	9.9	10.1	10.6	12.4
8H						9.4	9.6	9.8	10.1	10.5	12.4
Variations with the observer position at spacings:											
S = 1.0H						+ 2.1 / - 4.5			+ 2.9 / - 4.3		
1.5H						+ 3.0 / - 3.2			+ 4.6 / - 3.4		
2.0H						+ 3.0 / - 3.3			+ 3.6 / - 3.2		

CIE Pub.117, 1016 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = 0.1$)

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 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

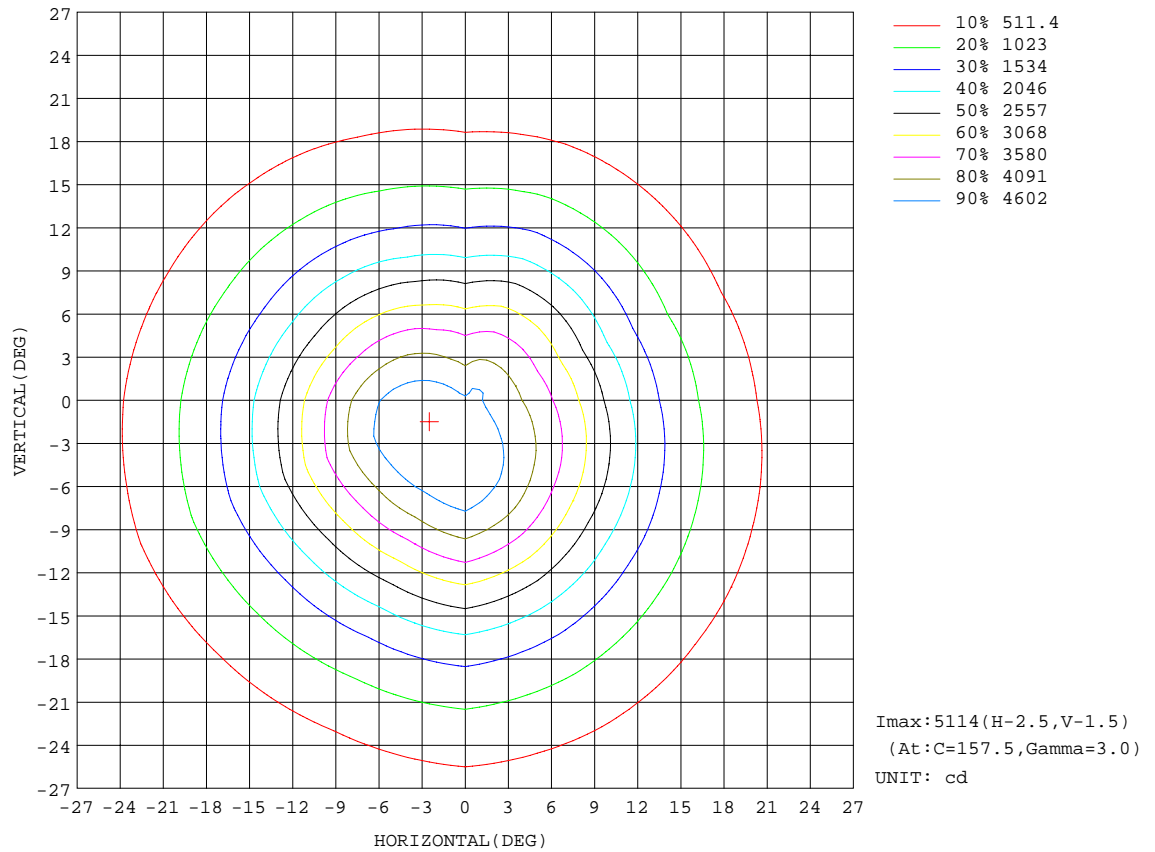
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	90	84	81	90	84	81	89	84	81	77
0.80	97	92	88	96	92	88	95	91	88	85
1.00	101	96	93	100	95	92	99	95	92	88
1.25	105	100	97	104	99	96	102	98	95	91
1.50	107	103	100	106	102	99	104	100	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	105	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 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

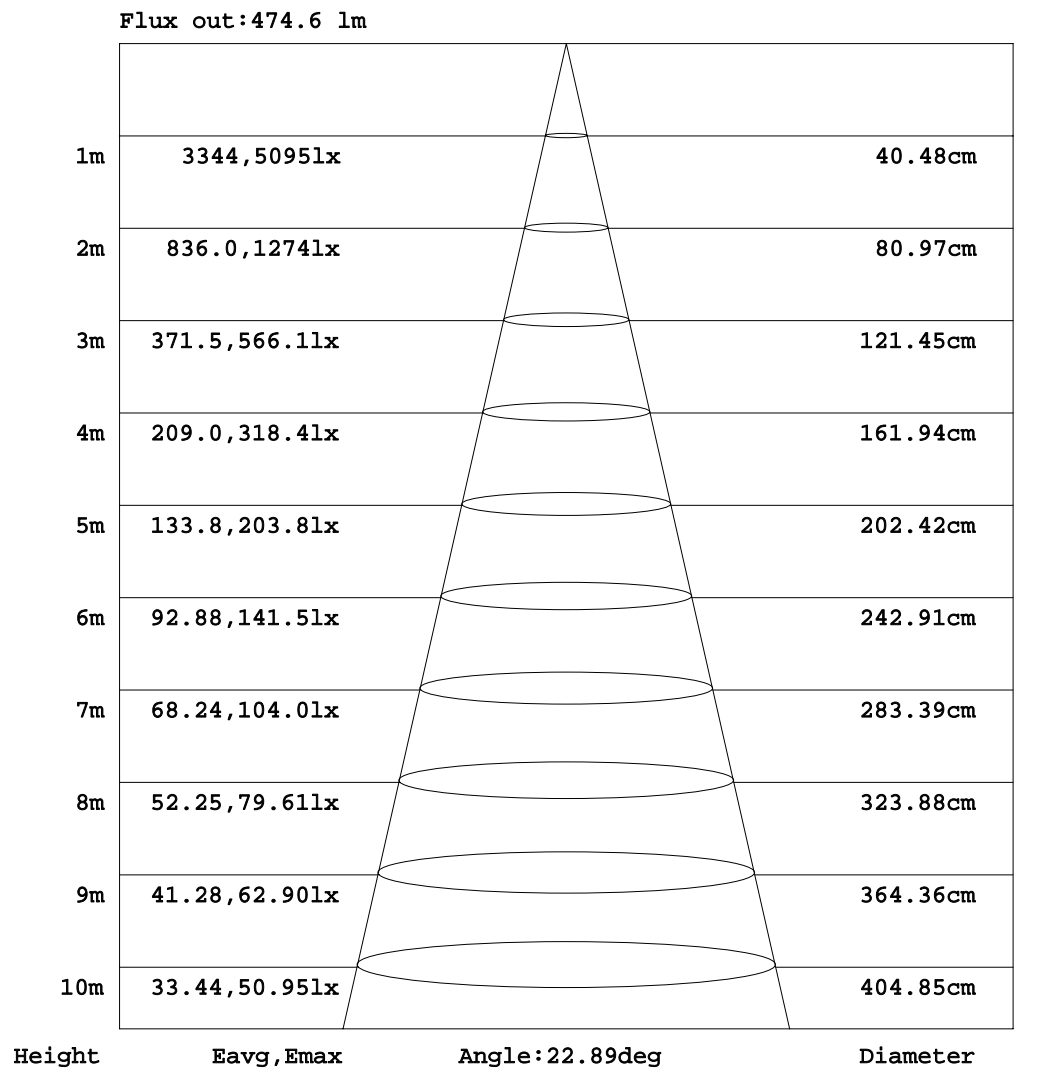


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:liangwei
Test Date:08 March 2019

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 24D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: VJC Lighting	SUR.:	Shielding Angle:

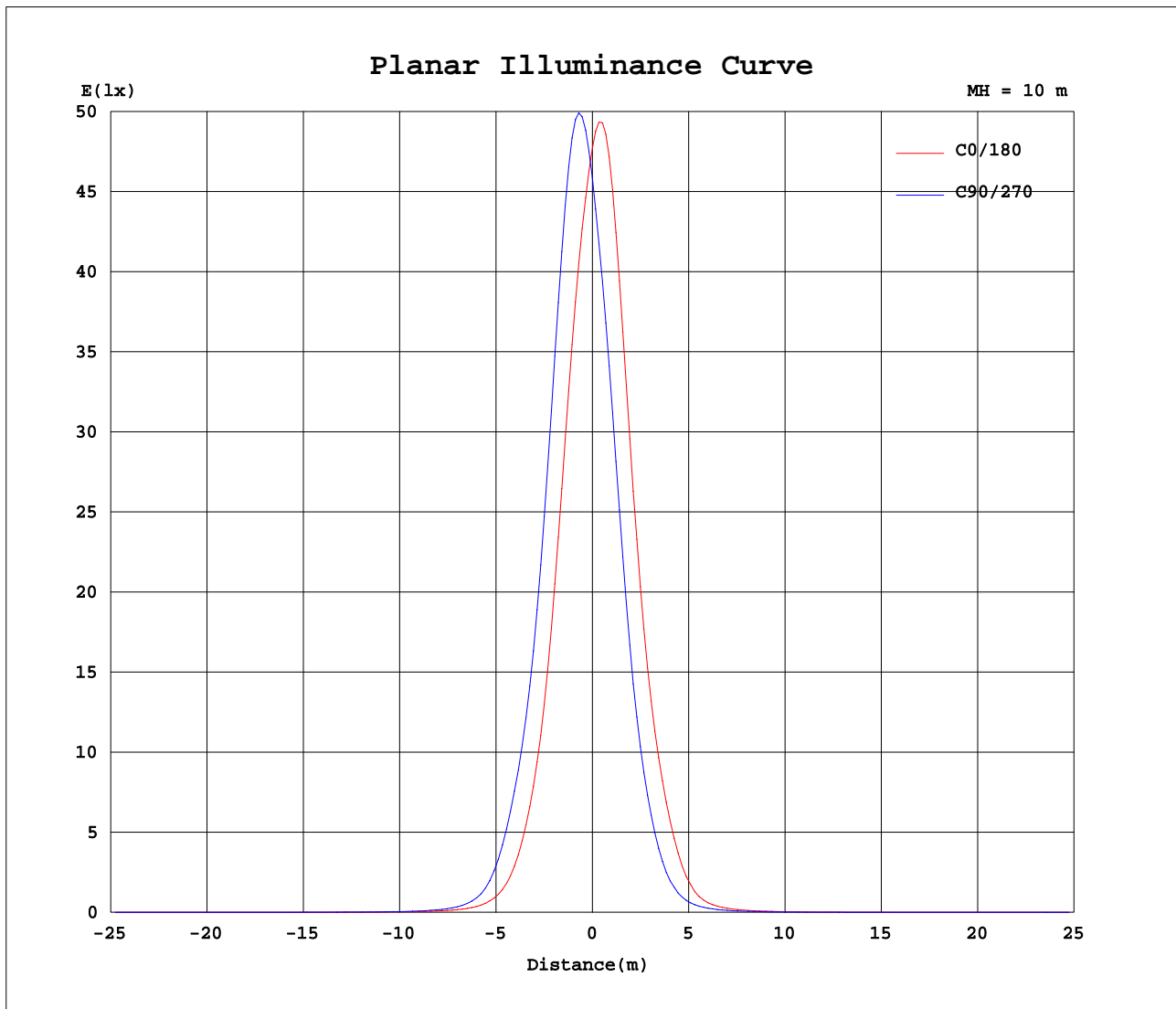


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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 24D	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	4771	4717	4662	4605	4584	4764	4836	4872	4771	4717	4662	4605	4584	4764	4836	4872			
5	3856	4127	4426	4749	5006	4977	4966	4966	4770	4366	4006	3660	3449	3623	3669	3692			
10	2452	2807	3178	3630	3987	3734	3679	3710	3443	2975	2605	2246	2021	2217	2239	2216			
15	1226	1486	1771	2117	2407	2184	2146	2170	1963	1627	1373	1125	970	1056	1072	1062			
20	539	698	874	1087	1258	1138	1109	1120	989	790	631	482	385	425	431	441			
25	192	263	349	469	565	473	450	465	388	285	221	160	128	144	147	153			
30	70.6	91.9	119	154	180	141	131	136	118	90.3	72.8	58.8	49.4	54.7	55.9	57.5			
35	31.6	39.2	47.7	58.7	64.3	50.9	47.5	49.1	47.0	38.8	32.7	27.2	23.3	25.1	25.5	26.2			
40	16.1	19.6	23.3	27.7	28.7	23.6	22.3	23.1	23.2	19.9	17.0	14.4	12.5	13.2	13.3	13.6			
45	9.10	11.0	12.9	15.1	15.3	13.0	12.5	12.9	13.3	11.6	10.0	8.56	7.53	7.83	7.81	7.80			
50	5.61	6.64	7.90	9.21	9.37	8.21	7.94	8.13	8.40	7.43	6.41	5.52	4.90	5.08	5.02	4.94			
55	3.65	4.26	5.07	5.91	6.15	5.53	5.38	5.48	5.66	4.95	4.19	3.58	3.16	3.33	3.31	3.22			
60	2.29	2.72	3.23	3.85	4.10	3.70	3.61	3.71	3.78	3.14	2.55	2.09	1.80	1.96	1.98	1.97			
65	1.12	1.47	1.83	2.28	2.54	2.27	2.23	2.24	2.17	1.63	1.17	0.86	0.65	0.84	0.88	0.88			
70	0.21	0.44	0.69	0.97	1.21	1.00	0.94	0.93	0.70	0.40	0.18	0.08	0.04	0.09	0.07	0.09			
75	0.05	0.03	0.07	0.07	0.17	0.05	0.09	0.05	0.04	0.05	0.02	0.04	0.01	0.04	0.01	0.03			
80	0.03	0.00	0.03	0.02	0.05	0.01	0.04	0.01	0.01	0.02	0.00	0.01	0.01	0.01	0.00	0.01			
85	0.02	0.00	0.00	0.00	0.02	0.00	0.01	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	0.01	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			
110	0.01	0.02	0.00	0.01	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00			
115	0.04	0.04	0.02	0.02	0.01	0.03	0.01	0.02	0.01	0.00	0.01	0.01	0.03	0.01	0.02	0.00			
120	0.07	0.07	0.05	0.05	0.05	0.05	0.02	0.04	0.03	0.02	0.05	0.04	0.07	0.04	0.04	0.04			
125	0.15	0.14	0.10	0.09	0.07	0.09	0.07	0.09	0.07	0.07	0.11	0.12	0.16	0.10	0.11	0.10			
130	0.41	0.32	0.25	0.21	0.17	0.19	0.17	0.20	0.17	0.21	0.29	0.34	0.42	0.33	0.33	0.31			
135	0.98	0.79	0.63	0.51	0.42	0.48	0.46	0.49	0.44	0.54	0.70	0.84	0.98	0.83	0.82	0.80			
140	2.08	1.72	1.41	1.17	0.98	1.11	1.10	1.13	0.99	1.20	1.46	1.73	1.94	1.73	1.69	1.69			
145	3.85	3.28	2.80	2.38	2.11	2.31	2.33	2.32	2.00	2.32	2.68	3.07	3.38	3.08	3.02	3.02			
150	6.13	5.42	4.79	4.26	3.86	4.16	4.18	4.16	3.45	3.83	4.29	4.74	5.09	4.78	4.65	4.61			
155	8.35	7.64	7.04	6.59	6.17	6.50	6.44	6.38	5.08	5.34	5.77	6.21	6.53	6.24	6.01	5.86			
160	9.82	9.14	8.88	8.57	8.39	8.53	8.43	8.31	6.34	6.32	6.56	6.94	7.54	6.96	6.60	6.36			
165	10.4	9.69	9.65	9.60	9.64	9.61	9.58	9.77	7.01	6.80	6.78	6.92	7.27	6.71	6.43	6.48			
170	10.2	10.1	9.65	10.1	9.95	10.1	10.0	10.6	7.19	7.28	7.00	7.09	6.84	6.59	6.45	6.95			
175	9.53	9.79	10.3	9.95	9.85	9.96	10.5	10.1	7.43	7.71	7.90	7.81	7.38	7.32	7.38	7.35			
180	8.60	8.83	9.35	8.99	9.23	9.00	9.35	8.77	8.64	8.76	9.40	8.92	9.26	8.94	9.36	8.71			

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: