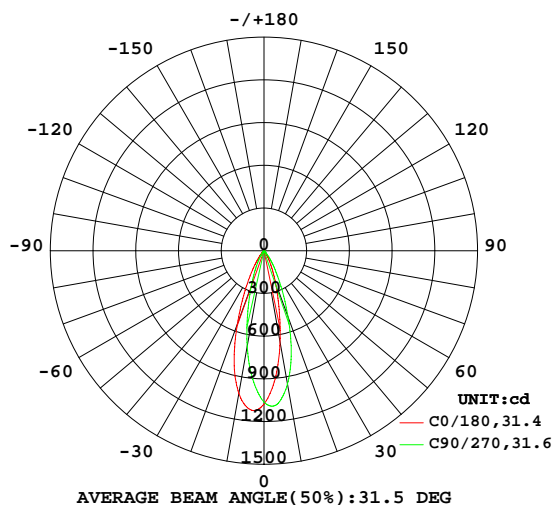


LUMINAIRE PHOTOMETRIC TEST REPORT

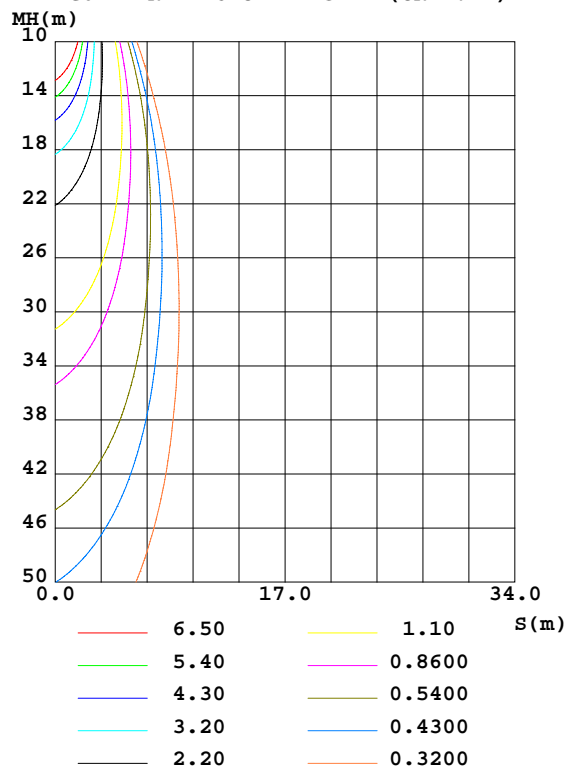
NAME: DL3108-10W3000K-36D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 36.97 lm/W
MODEL	DL3108-10W3000K-36D	Imax(cd)	1141	S/MH(C0/180)	0.64	
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.44	
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	407.58	η UP,DN(C0-180)	0.5,55.7	
NOMINAL FLUX(lm)	407.578	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.4,43.5	
LAMPS INSIDE	1	η up(%)	0.8	CIBSE SHR NOM	0.50	
TEST VOLTAGE(V)	220.1	η down(%)	99.2	CIBSE SHR MAX	0.55	

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:liangwei
 Test Date:11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 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	651.0	778.6	950.7	1058	1017	840.0	680.8	616.1	0- 10	89.65	89.65	22,22
20	234.8	312.8	493.0	614.7	547.3	372.4	259.6	218.6	10- 20	162.9	252.5	62,62
30	60.88	88.07	163.0	212.7	178.7	115.2	71.94	54.40	20- 30	102.7	355.2	87.2,87.2
40	9.912	16.71	39.76	55.75	40.68	22.23	12.23	9.321	30- 40	37.90	393.2	96.5,96.5
50	1.298	2.116	5.914	9.006	7.023	3.226	1.968	1.293	40- 50	8.950	402.1	98.7,98.7
60	0.4278	0.6311	0.9735	1.246	1.191	0.7504	0.3945	0.2986	50- 60	1.621	403.7	99.1,99.1
70	0.0964	0.1747	0.2532	0.3246	0.3199	0.1812	0.0746	0.0499	60- 70	0.3979	404.1	99.2,99.2
80	0.0073	0.0143	0.0536	0.0786	0.0462	0	0	0	70- 80	0.0903	404.2	99.2,99.2
90	0	0	0	0	0	0	0	0	80- 90	0.0051	404.2	99.2,99.2
100	0	0	0	0	0	0	0	0	90-100	0	404.2	99.2,99.2
110	0	0	0	0	0	0	0.0001	0.0108	100-110	0.0002	404.2	99.2,99.2
120	0.0816	0.0496	0.0105	0.0035	0.0142	0.0285	0.0679	0.0999	110-120	0.0149	404.2	99.2,99.2
130	0.4478	0.2630	0.1599	0.1174	0.1141	0.1675	0.3030	0.3815	120-130	0.1072	404.3	99.2,99.2
140	1.391	0.8999	0.6400	0.5191	0.4243	0.5777	0.8984	1.034	130-140	0.3608	404.7	99.3,99.3
150	2.627	2.043	1.602	1.416	1.076	1.351	1.778	1.877	140-150	0.7605	405.5	99.5,99.5
160	3.311	2.930	2.823	2.492	1.867	2.077	2.647	2.332	150-160	0.9882	406.4	99.7,99.7
170	4.565	3.354	3.475	3.471	2.660	2.696	2.877	2.601	160-170	0.8195	407.3	99.9,99.9
180	3.258	3.404	3.525	3.604	3.244	3.401	3.508	3.590	170-180	0.3116	407.6	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 399.41 lm

%lum = 98.0%

%lamp = 98.0%

Conical surface Flux(120deg): 403.72 lm

%lum = 99.1%

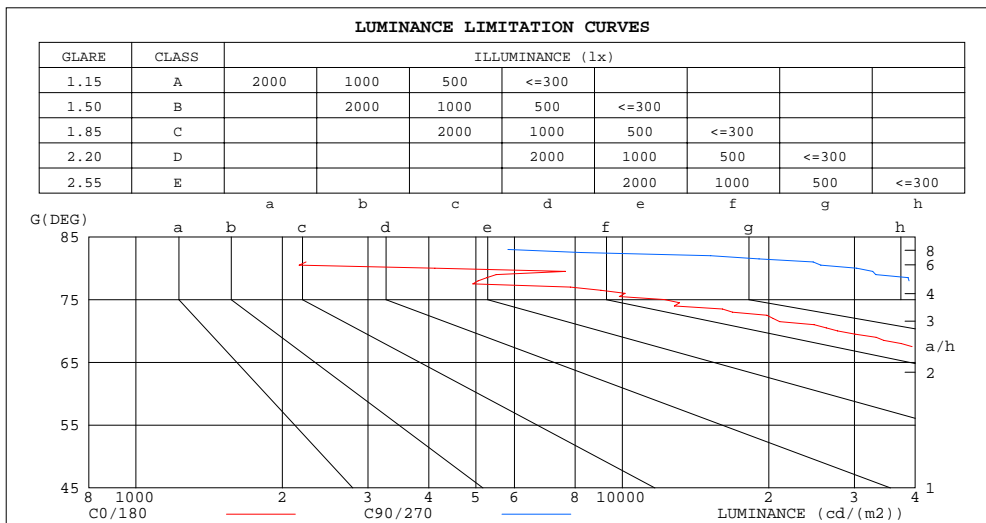
%lamp = 99.1%

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature:25.3DEG
 Operators:liangwei
 Test Date:11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 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: DL3108-10W3000K-36D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	0	0
80	4119	30333
75	12208	50153
70	27706	72794
65	51465	114548
60	84135	191450
55	131430	378139
50	198557	904730
45	427178	2073835

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: liangwei
Test Date: 11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
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: DL3108-10W3000K-36D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	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	.154	.088	.028	.147	.084	.027	.134	.077	.025	.122	.071	.023	.111	.065	.021		
2.0	.145	.079	.024	.139	.077	.024	.128	.071	.022	.118	.066	.021	.109	.062	.019		
3.0	.137	.073	.022	.132	.071	.021	.123	.067	.020	.114	.063	.019	.106	.059	.018		
4.0	.129	.067	.020	.125	.066	.019	.117	.062	.019	.110	.059	.018	.103	.056	.017		
5.0	.123	.063	.018	.119	.061	.018	.112	.059	.017	.106	.056	.017	.100	.054	.016		
6.0	.117	.059	.017	.114	.057	.017	.108	.055	.016	.102	.053	.016	.097	.051	.015		
7.0	.112	.055	.016	.109	.054	.015	.104	.052	.015	.099	.051	.015	.094	.049	.014		
8.0	.107	.052	.015	.104	.051	.015	.100	.050	.014	.095	.048	.014	.091	.047	.014		
9.0	.102	.049	.014	.100	.049	.014	.096	.047	.013	.092	.046	.013	.088	.045	.013		
10.0	.098	.047	.013	.096	.046	.013	.092	.045	.013	.089	.044	.013	.086	.043	.012		

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	.176	.164	.153	.150	.141	.132	.103	.097	.091	.059	.056	.053	.019	.018	.017	
2.0	.159	.139	.122	.136	.120	.106	.093	.083	.074	.054	.048	.043	.017	.016	.014	
3.0	.145	.120	.100	.125	.103	.086	.085	.072	.061	.049	.042	.036	.016	.014	.012	
4.0	.134	.105	.083	.115	.091	.072	.079	.063	.051	.046	.037	.030	.015	.012	.010	
5.0	.124	.093	.070	.107	.080	.061	.073	.056	.043	.043	.033	.025	.014	.011	.008	
6.0	.116	.083	.060	.100	.072	.052	.069	.050	.037	.040	.030	.022	.013	.010	.007	
7.0	.109	.075	.052	.094	.065	.045	.065	.046	.032	.038	.027	.019	.012	.009	.006	
8.0	.103	.069	.045	.089	.060	.039	.061	.042	.028	.036	.025	.017	.012	.008	.006	
9.0	.098	.063	.040	.084	.055	.035	.058	.039	.025	.034	.023	.015	.011	.007	.005	
10.0	.093	.059	.036	.080	.051	.031	.056	.036	.022	.032	.021	.013	.011	.007	.004	

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:liangwei
Test Date:11 September 2017

γ Range: 0 - 180DEG
γ Interval: 0.5DEG
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: DL3108-10W3000K-36D					TYPE:					WEIGHT:				
SPEC.:					DIM.:					SERIAL No.:				
MFR.: SPEL LTGHTING					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					30.1	30.9	30.3	31.0	31.2	35.6	36.4	35.8	36.5	36.7
3H					29.9	30.6	30.2	30.8	31.1	35.4	36.2	35.7	36.4	36.6
4H					29.8	30.5	30.1	30.7	31.0	35.4	36.0	35.6	36.3	36.5
6H					29.8	30.4	30.1	30.6	30.9	35.3	35.9	35.6	36.2	36.4
8H					29.7	30.3	30.0	30.6	30.9	35.2	35.8	35.5	36.1	36.4
12H					29.7	30.3	30.0	30.5	30.8	35.2	35.8	35.5	36.1	36.3
4H 2H					29.9	30.5	30.1	30.8	31.0	35.4	36.0	35.6	36.3	36.5
3H					29.7	30.3	30.0	30.6	30.8	35.2	35.8	35.5	36.1	36.3
4H					29.6	30.1	29.9	30.4	30.8	35.1	35.6	35.4	35.9	36.3
6H					29.5	30.0	29.9	30.3	30.7	35.0	35.5	35.4	35.8	36.2
8H					29.4	29.9	29.8	30.2	30.6	34.9	35.4	35.3	35.7	36.1
12H					29.4	29.8	29.8	30.2	30.6	34.9	35.3	35.3	35.7	36.1
8H 4H					29.4	29.9	29.8	30.2	30.6	34.9	35.4	35.3	35.7	36.1
6H					29.3	29.7	29.8	30.1	30.5	34.8	35.2	35.3	35.6	36.0
8H					29.3	29.6	29.7	30.0	30.5	34.8	35.1	35.2	35.5	36.0
12H					29.2	29.5	29.7	29.9	30.4	34.7	35.0	35.2	35.4	35.9
12H 4H					29.4	29.8	29.8	30.2	30.6	34.9	35.3	35.3	35.7	36.1
6H					29.3	29.6	29.7	30.0	30.5	34.8	35.1	35.2	35.5	36.0
8H					29.2	29.5	29.7	29.9	30.4	34.7	35.0	35.2	35.4	35.9
Variations with the observer position at spacings:														
S = 1.0H					+ 2.8 / -11.8					+ 5.0 / -14.4				
1.5H					+ 5.2 / - 8.9					+ 7.3 / -13.3				
2.0H					+ 5.1 / - 5.8					+ 8.3 / - 9.8				

CIE Pub.117, 407.6 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -3.1$)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:liangwei
Test Date:11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
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: DL3108-10W3000K-36D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

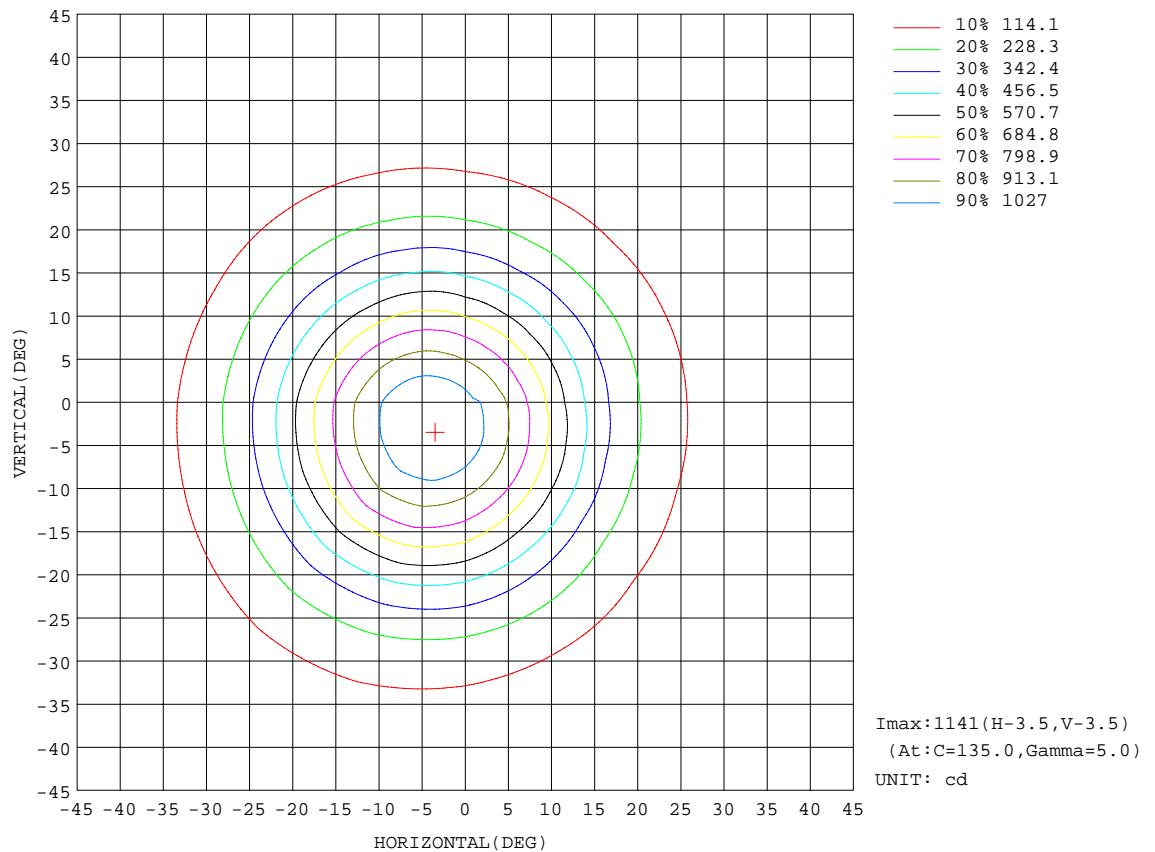
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	89	83	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	87	95	90	87	84
1.00	101	95	92	100	95	92	98	95	91	87
1.25	104	99	96	103	99	96	101	98	95	91
1.50	107	102	99	106	102	99	103	100	98	93
2.00	109	105	102	108	104	101	105	102	100	95
2.50	111	107	104	109	106	103	106	103	101	95
3.00	112	109	106	110	107	105	107	105	103	96
4.00	114	111	109	112	110	108	108	107	105	98
5.00	115	113	111	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: MEDIUM
Temperature:25.3DEG
Operators:liangwei
Test Date:11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.650m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

NAME: DL3108-10W3000K-36D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

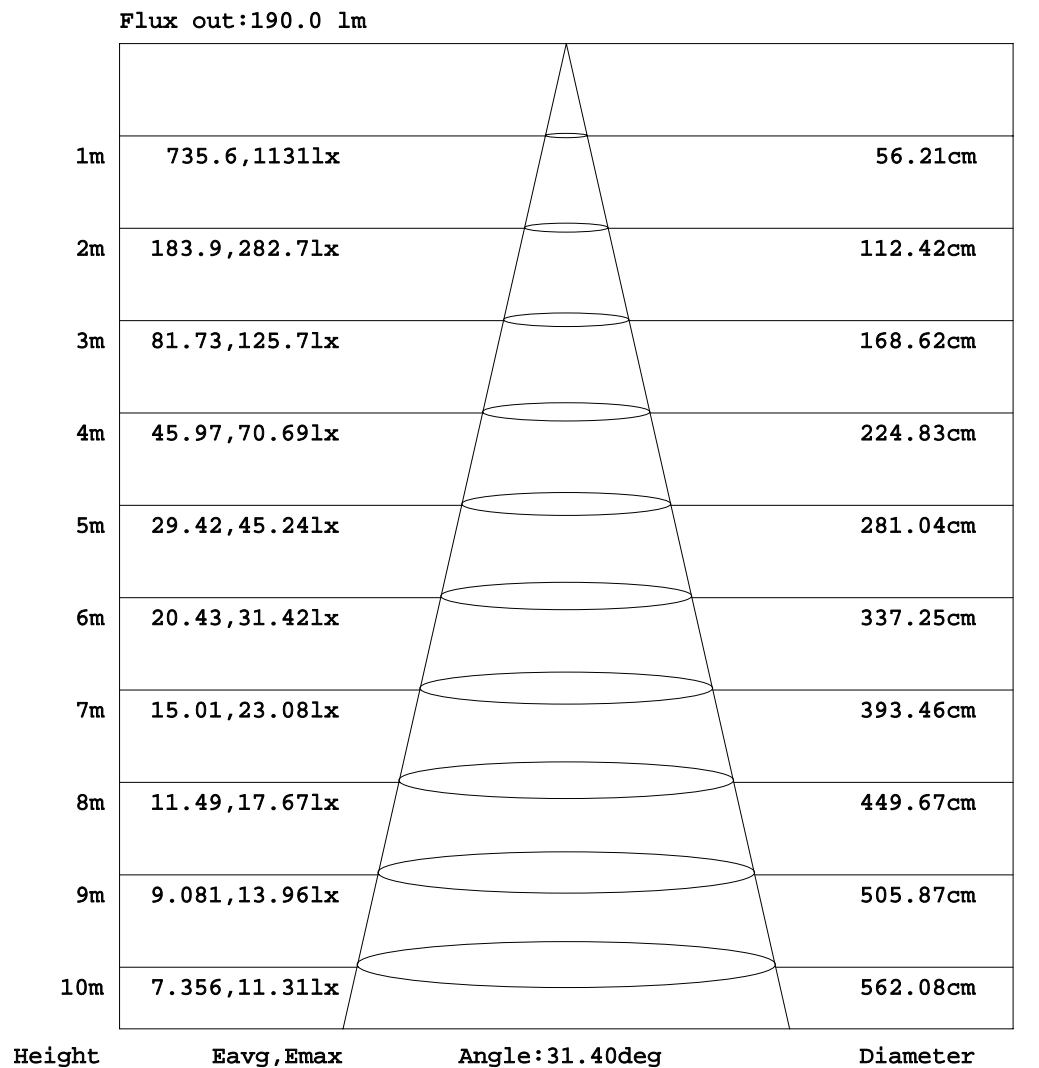


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature:25.3DEG
Operators:liangwei
Test Date:11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:7.650m [K=1.0000]
Remarks:

AAI Figure

NAME: DL3108-10W3000K-36D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

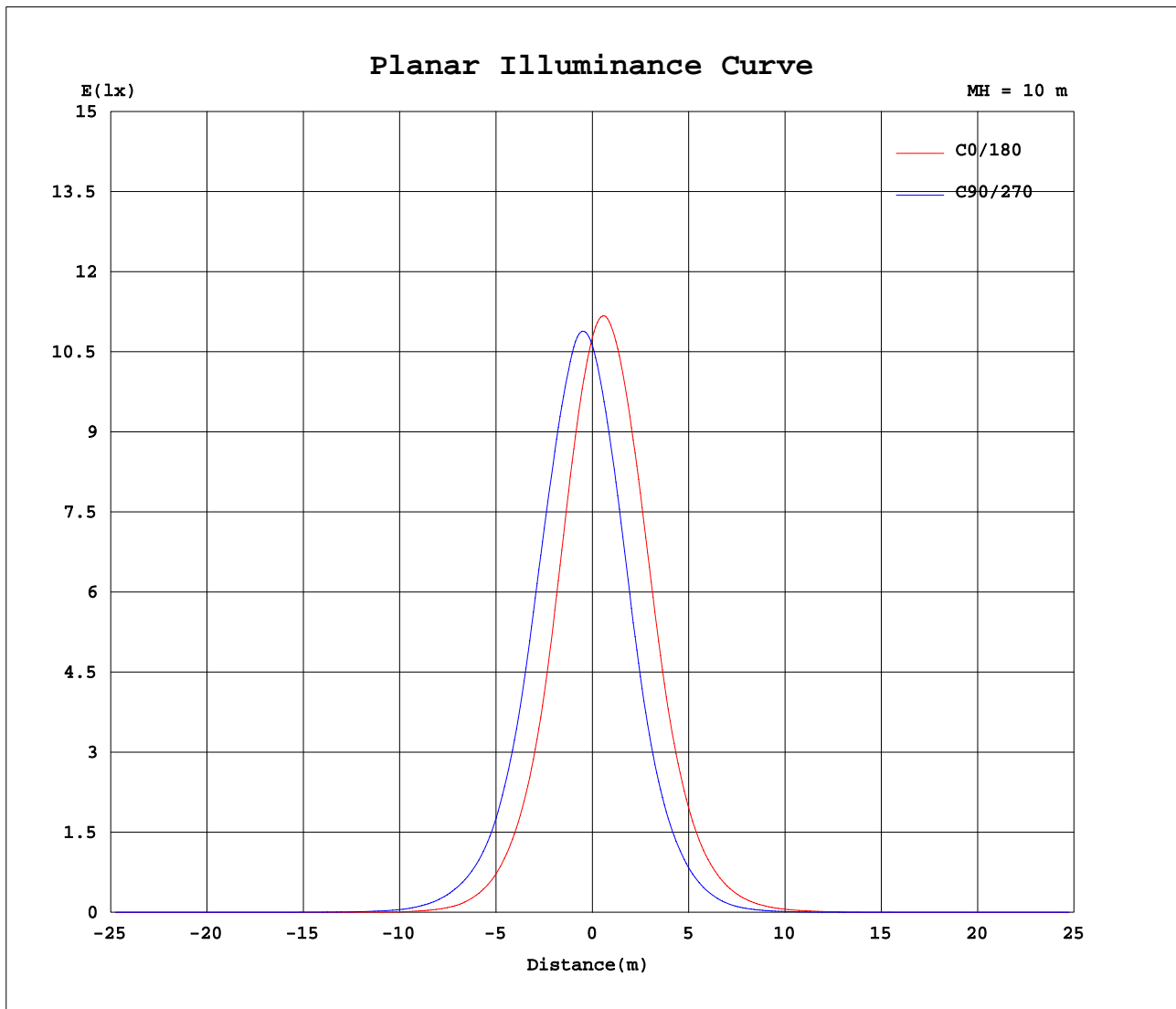


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: MEDIUM
 Temperature: 25.3DEG
 Operators: liangwei
 Test Date: 11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
 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: MEDIUM
Temperature: 25.3DEG
Operators: liangwei
Test Date: 11 September 2017

γ Range: 0 - 180DEG
 γ Interval: 0.5DEG
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: DL3108-10W3000K-36D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	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	1076	1071	1067	1064	1062	1061	1059	1059	1076	1071	1067	1064	1062	1061	1059	1059			
5	903	932	974	1028	1081	1123	1141	1130	1120	1067	1008	951	907	880	868	874			
10	651	702	779	864	951	1022	1058	1044	1017	932	840	756	681	634	616	623			
15	405	452	531	629	742	828	874	849	810	707	599	511	439	398	384	387			
20	235	261	313	398	493	575	615	593	547	458	372	308	260	229	219	225			
25	126	140	172	232	295	347	375	356	328	269	216	174	144	124	114	117			
30	60.9	68.6	88.1	124	163	197	213	197	179	143	115	90.9	71.9	61.9	54.4	55.0			
35	25.3	29.4	40.2	60.9	86.7	107	113	104	89.7	67.2	54.3	39.9	31.1	26.6	22.6	22.9			
40	9.91	11.6	16.7	26.0	39.8	51.6	55.8	49.9	40.7	28.9	22.2	15.7	12.2	10.8	9.32	8.82			
45	3.07	4.36	6.01	9.85	14.9	22.1	22.8	21.0	17.1	11.9	9.27	6.42	4.93	4.58	3.65	3.25			
50	1.30	1.74	2.12	3.22	5.91	9.11	9.01	8.34	7.02	5.07	3.23	2.15	1.97	1.23	1.29	1.19			
55	0.77	0.91	1.14	1.37	2.21	3.04	3.33	2.80	2.32	2.06	1.33	1.05	0.79	0.65	0.60	0.67			
60	0.43	0.46	0.63	0.77	0.97	1.01	1.25	1.17	1.19	1.01	0.75	0.59	0.39	0.37	0.30	0.36			
65	0.22	0.22	0.34	0.41	0.49	0.56	0.63	0.63	0.64	0.52	0.39	0.30	0.18	0.20	0.14	0.19			
70	0.10	0.09	0.17	0.21	0.25	0.30	0.32	0.30	0.32	0.25	0.18	0.15	0.07	0.09	0.05	0.07			
75	0.03	0.01	0.07	0.08	0.13	0.15	0.16	0.14	0.15	0.11	0.06	0.05	0.01	0.03	0.00	0.02			
80	0.01	0.00	0.01	0.01	0.05	0.05	0.08	0.05	0.05	0.04	0.00	0.01	0.00	0.00	0.00	0.00			
85	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.01	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	0.00	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	0.01	0.00		
115	0.02	0.03	0.00	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.03	0.02	0.04	0.01			
120	0.08	0.08	0.05	0.05	0.01	0.02	0.00	0.02	0.01	0.00	0.03	0.02	0.07	0.07	0.10	0.06			
125	0.21	0.19	0.11	0.11	0.06	0.07	0.05	0.07	0.05	0.04	0.07	0.09	0.15	0.17	0.20	0.16			
130	0.45	0.37	0.26	0.23	0.16	0.16	0.12	0.15	0.11	0.11	0.17	0.20	0.30	0.33	0.38	0.33			
135	0.82	0.68	0.52	0.44	0.33	0.31	0.27	0.31	0.22	0.23	0.32	0.39	0.54	0.60	0.66	0.60			
140	1.39	1.15	0.90	0.78	0.64	0.59	0.52	0.57	0.42	0.45	0.58	0.70	0.90	0.97	1.03	0.97			
145	2.09	1.75	1.43	1.28	1.09	0.99	0.91	0.96	0.71	0.76	0.92	1.10	1.34	1.41	1.46	1.38			
150	2.63	2.33	2.04	1.83	1.60	1.50	1.42	1.46	1.08	1.15	1.35	1.54	1.78	1.88	1.88	1.76			
155	3.05	2.84	2.58	2.48	2.24	2.12	1.98	2.03	1.49	1.53	1.77	1.99	2.20	2.34	2.22	2.00			
160	3.31	3.09	2.93	2.98	2.82	2.73	2.49	2.55	1.87	1.89	2.08	2.43	2.65	2.69	2.33	2.18			
165	4.04	3.48	3.20	3.28	3.26	3.26	3.03	3.21	2.34	2.25	2.37	2.76	3.01	2.82	2.37	2.38			
170	4.57	4.06	3.35	3.48	3.48	3.55	3.47	3.83	2.66	2.68	2.70	2.81	2.88	2.76	2.60	2.80			
175	3.74	3.55	3.50	3.48	3.53	3.59	3.70	3.70	2.82	2.88	2.96	2.98	2.94	2.97	3.01	3.00			
180	3.26	3.23	3.40	3.34	3.53	3.46	3.60	3.42	3.24	3.19	3.40	3.32	3.51	3.44	3.59	3.40			

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: MEDIUM

Temperature:25.3DEG

Operators:liangwei

Test Date:11 September 2017

γ Range: 0 - 180DEG

γ Interval: 0.5DEG

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

Humidity:65.0%

Test Distance:7.650m [K=1.0000]

Remarks: