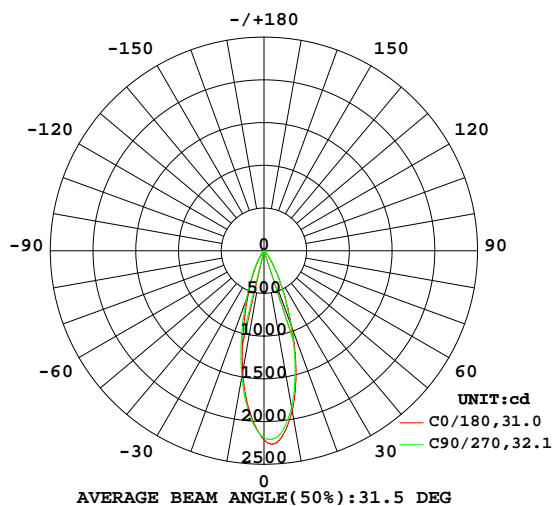


LUMINAIRE PHOTOMETRIC TEST REPORT

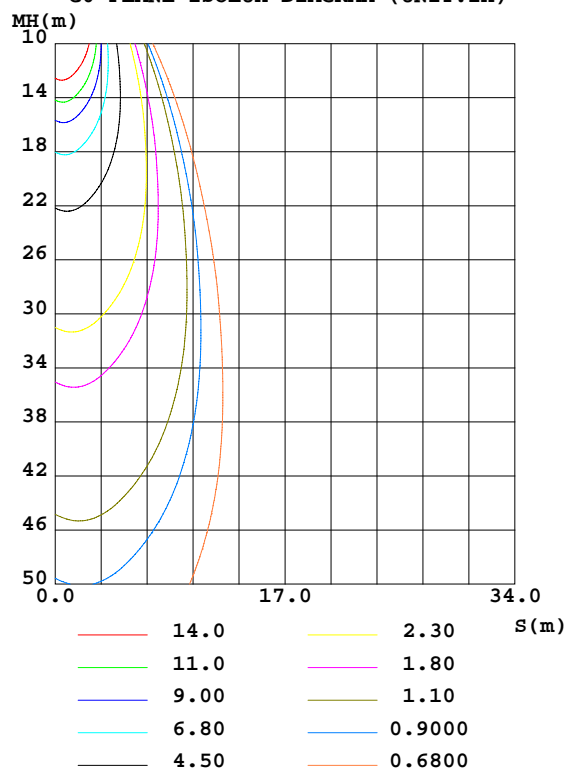
NAME: DL3115-2*10W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 37.22 lm/W			
MODEL	DL3115-2*10W	Imax(cd)	2279	S/MH(C0/180)	0.44
NOMINAL POWER(W)	20	LOR(%)	100.0	S/MH(C90/270)	0.47
RATED VOLTAGE(V)	220	TOTAL FLUX(lm)	810.34	η UP,DN(C0-180)	0.6,56.2
NOMINAL FLUX(lm)	810.339	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.3,42.9
LAMPS INSIDE	1	η up(%)	0.9	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	220.1	η down(%)	99.1	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	1902	1965	1862	1608	1437	1395	1495	1709	0- 10	182.8	182.8	22.6,22.6
20	947.2	1022	917.6	683.8	535.9	528.7	606.1	785.5	10- 20	326.6	509.4	62.9,62.9
30	301.8	339.6	294.9	199.2	149.9	138.0	172.6	229.5	20- 30	201.7	711.1	87.8,87.8
40	62.73	77.25	66.79	38.37	24.67	22.34	32.47	45.40	30- 40	71.96	783.1	96.6,96.6
50	9.813	12.32	11.06	5.763	3.568	3.196	4.434	7.080	40- 50	16.26	799.3	98.6,98.6
60	1.765	1.975	1.658	1.248	0.9353	0.9351	0.9745	1.341	50- 60	2.934	802.3	99,99
70	0.5028	0.5777	0.5100	0.3496	0.2419	0.2489	0.2774	0.3662	60- 70	0.7621	803.0	99.1,99.1
80	0.1214	0.1249	0.1212	0.0820	0.0248	0.0248	0.0424	0.0533	70- 80	0.2061	803.2	99.1,99.1
90	0.0179	0.0142	0.0214	0.0142	0.0142	0.0107	0	0.0071	80- 90	0.0344	803.3	99.1,99.1
100	0.0178	0.0142	0.0142	0.0142	0.0142	0.0107	0.0142	0.0107	90-100	0.0139	803.3	99.1,99.1
110	0.0214	0.0142	0.0248	0.0356	0.0392	0.0357	0.0357	0.0214	100-110	0.0202	803.3	99.1,99.1
120	0.1067	0.0816	0.1137	0.1600	0.1461	0.1605	0.1462	0.0999	110-120	0.0645	803.4	99.1,99.1
130	0.4478	0.3838	0.5370	0.6897	0.5136	0.5529	0.5170	0.3746	120-130	0.2476	803.6	99.2,99.2
140	1.614	1.532	1.935	2.454	1.430	1.515	1.404	1.094	130-140	0.7528	804.4	99.3,99.3
150	4.557	4.064	4.548	5.361	2.654	2.764	2.569	2.238	140-150	1.605	806.0	99.5,99.5
160	9.000	6.900	9.080	7.261	3.380	3.362	3.312	3.013	150-160	2.200	808.2	99.7,99.7
170	6.886	6.126	8.543	5.983	3.929	3.901	4.118	3.288	160-170	1.582	809.8	99.9,99.9
180	12.91	10.16	7.784	9.832	12.98	10.21	7.710	9.853	170-180	0.5839	810.3	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 794.43 lm

%lum = 98.0%

%lamp = 98.0%

Conical surface Flux(120deg): 802.27 lm

%lum = 99.0%

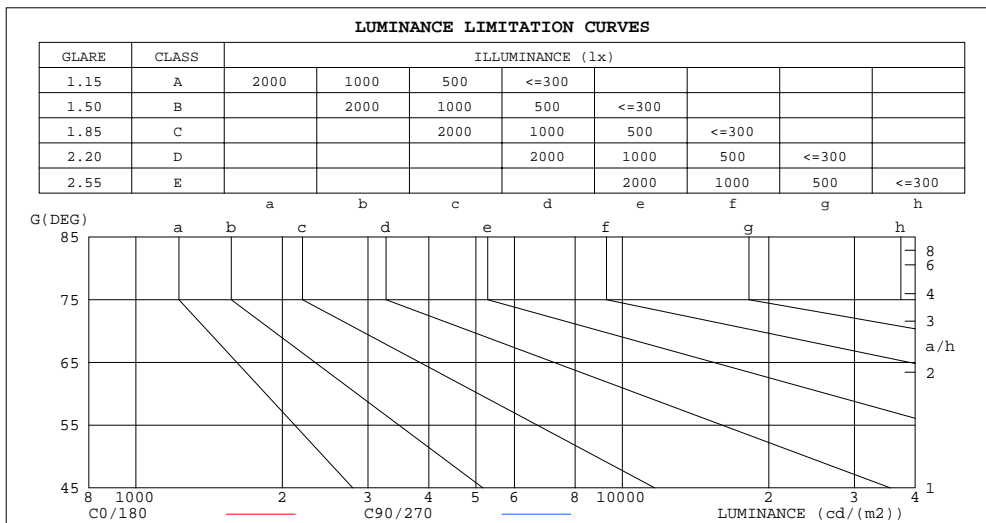
%lamp = 99.0%

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: DL3115-2*10W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	60557	68494
80	68731	68645
75	90836	96215
70	144564	146612
65	225686	218191
60	347101	326049
55	657271	787177
50	1501111	1692423
45	3511371	3993814

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: DL3115-2*10W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	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	.153	.087	.028	.146	.083	.026	.133	.076	.024	.121	.070	.022	.110	.064	.021		
2.0	.144	.079	.024	.138	.076	.023	.127	.071	.022	.117	.066	.021	.108	.061	.019		
3.0	.136	.072	.022	.131	.070	.021	.122	.066	.020	.113	.062	.019	.105	.058	.018		
4.0	.128	.067	.020	.124	.065	.019	.116	.062	.018	.109	.059	.018	.102	.056	.017		
5.0	.122	.062	.018	.118	.061	.018	.111	.058	.017	.105	.055	.016	.099	.053	.016		
6.0	.116	.058	.017	.113	.057	.016	.107	.055	.016	.101	.053	.015	.096	.051	.015		
7.0	.111	.055	.015	.108	.054	.015	.103	.052	.015	.098	.050	.015	.093	.048	.014		
8.0	.106	.052	.015	.103	.051	.014	.099	.049	.014	.094	.048	.014	.090	.046	.013		
9.0	.101	.049	.014	.099	.048	.014	.095	.047	.013	.091	.046	.013	.087	.044	.013		
10.0	.097	.047	.013	.095	.046	.013	.092	.045	.013	.088	.044	.012	.085	.043	.012		

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						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	.151	.141	.132	.103	.097	.091	.059	.056	.053	.019	.018	.017	
2.0	.159	.139	.123	.136	.120	.106	.093	.083	.074	.054	.048	.043	.017	.016	.014	
3.0	.145	.120	.100	.125	.104	.087	.086	.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	.081	.061	.073	.056	.043	.043	.033	.026	.014	.011	.008	
6.0	.116	.083	.060	.100	.072	.052	.069	.051	.037	.040	.030	.022	.013	.010	.007	
7.0	.109	.076	.052	.094	.065	.045	.065	.046	.032	.038	.027	.019	.012	.009	.006	
8.0	.103	.069	.046	.089	.060	.040	.061	.042	.028	.036	.025	.017	.012	.008	.006	
9.0	.098	.064	.041	.084	.055	.035	.058	.039	.025	.034	.023	.015	.011	.008	.005	
10.0	.093	.059	.037	.080	.051	.032	.056	.036	.023	.032	.021	.014	.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: DL3115-2*10W					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					36.9	37.7	37.2	37.9	38.0	37.0	37.8	37.3	38.0	38.1
3H					36.8	37.5	37.0	37.7	37.9	36.9	37.6	37.1	37.8	38.0
4H					36.7	37.4	37.0	37.6	37.8	36.8	37.5	37.1	37.7	37.9
6H					36.6	37.2	36.9	37.5	37.8	36.7	37.3	37.0	37.6	37.8
8H					36.6	37.2	36.9	37.4	37.7	36.7	37.3	37.0	37.5	37.8
12H					36.5	37.1	36.8	37.4	37.7	36.6	37.2	36.9	37.5	37.8
4H 2H					36.7	37.4	37.0	37.6	37.8	36.8	37.5	37.1	37.7	37.9
3H					36.5	37.1	36.9	37.4	37.7	36.6	37.2	36.9	37.5	37.8
4H					36.4	37.0	36.8	37.3	37.6	36.5	37.1	36.9	37.4	37.7
6H					36.3	36.8	36.7	37.1	37.5	36.4	36.9	36.8	37.2	37.6
8H					36.3	36.7	36.7	37.1	37.5	36.4	36.8	36.8	37.2	37.5
12H					36.2	36.6	36.6	37.0	37.4	36.3	36.7	36.7	37.1	37.5
8H 4H					36.3	36.7	36.7	37.1	37.5	36.4	36.8	36.8	37.2	37.5
6H					36.2	36.5	36.6	36.9	37.4	36.3	36.6	36.7	37.0	37.5
8H					36.1	36.4	36.6	36.9	37.3	36.2	36.5	36.7	36.9	37.4
12H					36.0	36.3	36.5	36.8	37.3	36.1	36.4	36.6	36.9	37.4
12H 4H					36.2	36.6	36.6	37.0	37.4	36.3	36.7	36.7	37.1	37.5
6H					36.1	36.4	36.6	36.9	37.3	36.2	36.5	36.7	36.9	37.4
8H					36.0	36.3	36.5	36.8	37.3	36.1	36.4	36.6	36.9	37.4
Variations with the observer position at spacings:														
S = 1.0H					+ 2.9 / -14.0					+ 2.9 / -13.6				
1.5H					+ 5.1 / -11.5					+ 5.1 / -10.9				
2.0H					+ 6.3 / - 8.5					+ 6.4 / - 9.7				

CIE Pub.117, 810.3 lm Total Lamp Luminous Flux Correct ($8\log(F/F_0) = -0.7$)

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: DL3115-2*10W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

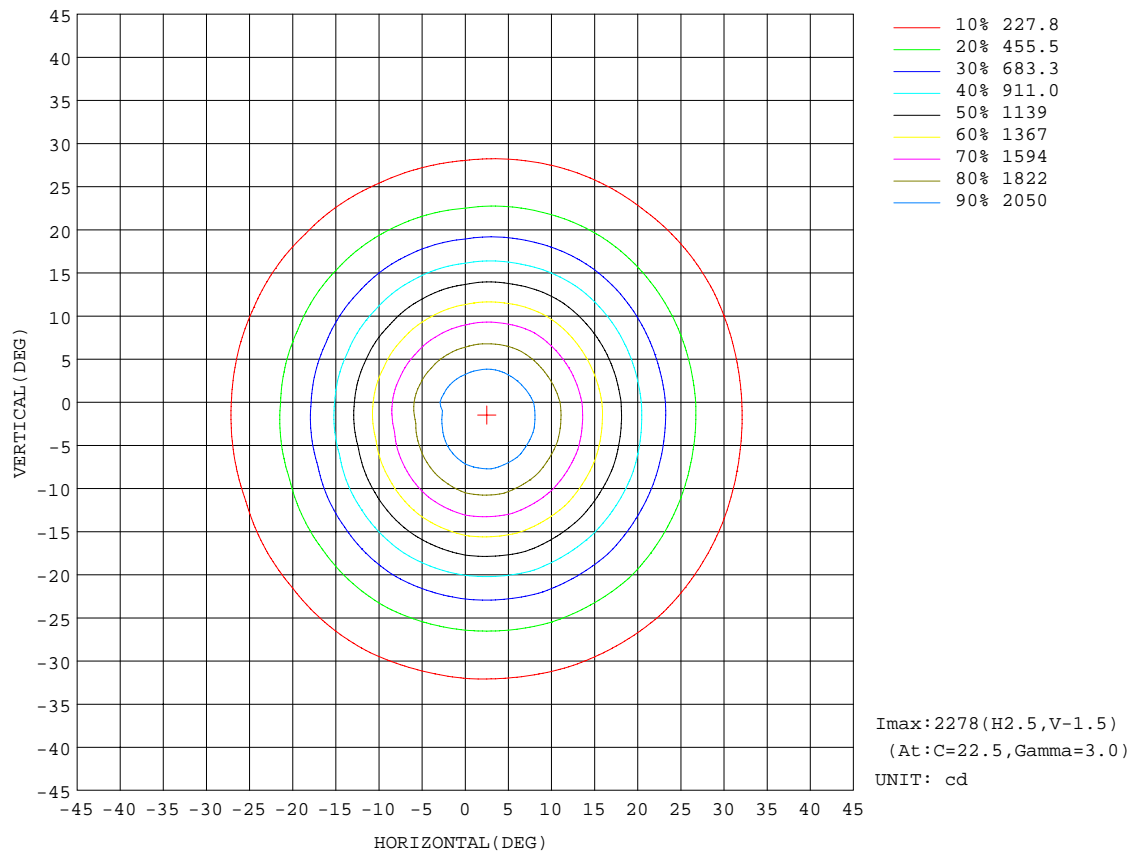
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	89	84	80	89	83	80	88	83	80	76
0.80	97	91	88	96	91	88	95	90	87	84
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										
SHRNM = 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: DL3115-2*10W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

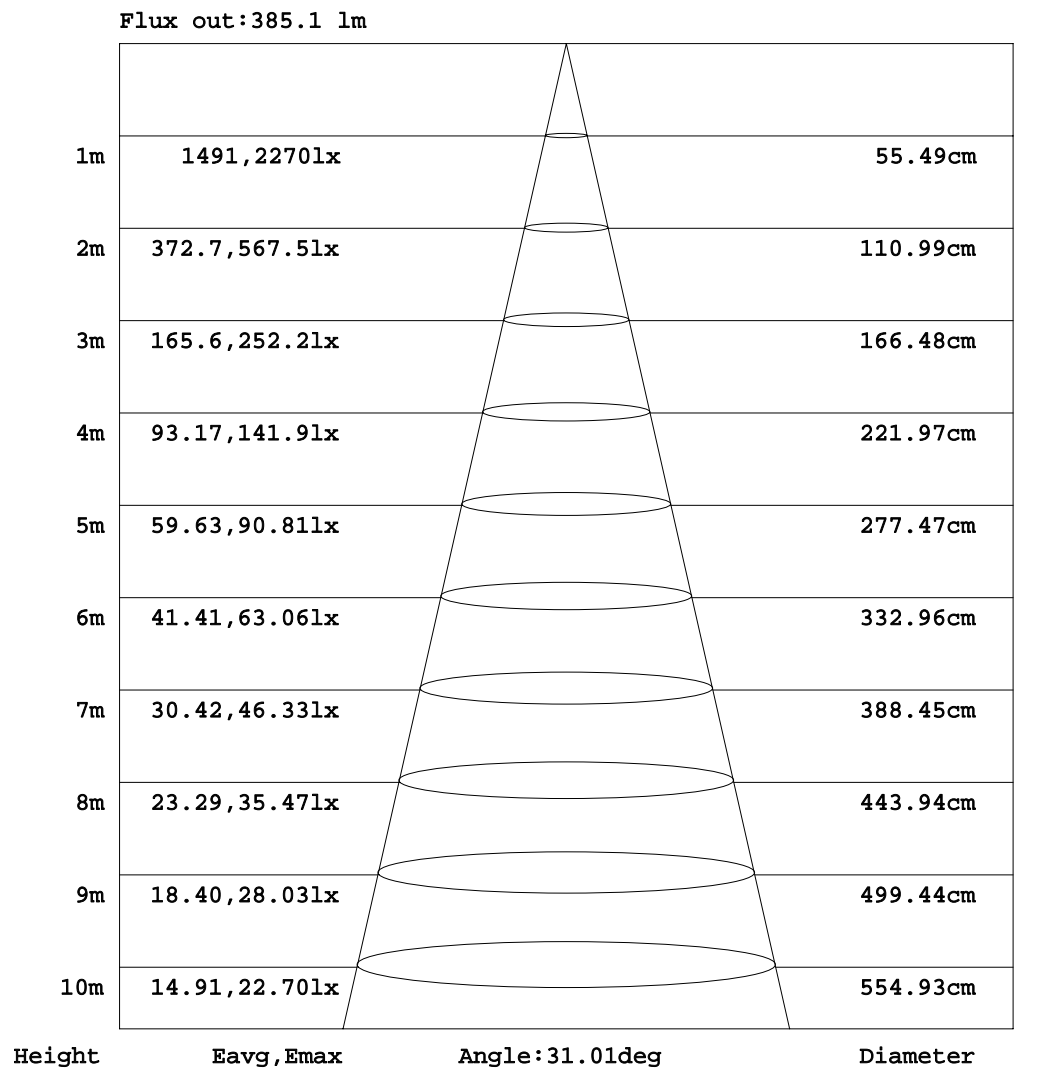


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: MEDIUM
Temperature: 25.3DEG
Operators: liangwei
Test Date: 11 September 2017

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: DL3115-2*10W	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SPEL LTGHTING	SUR.:	Shielding Angle:

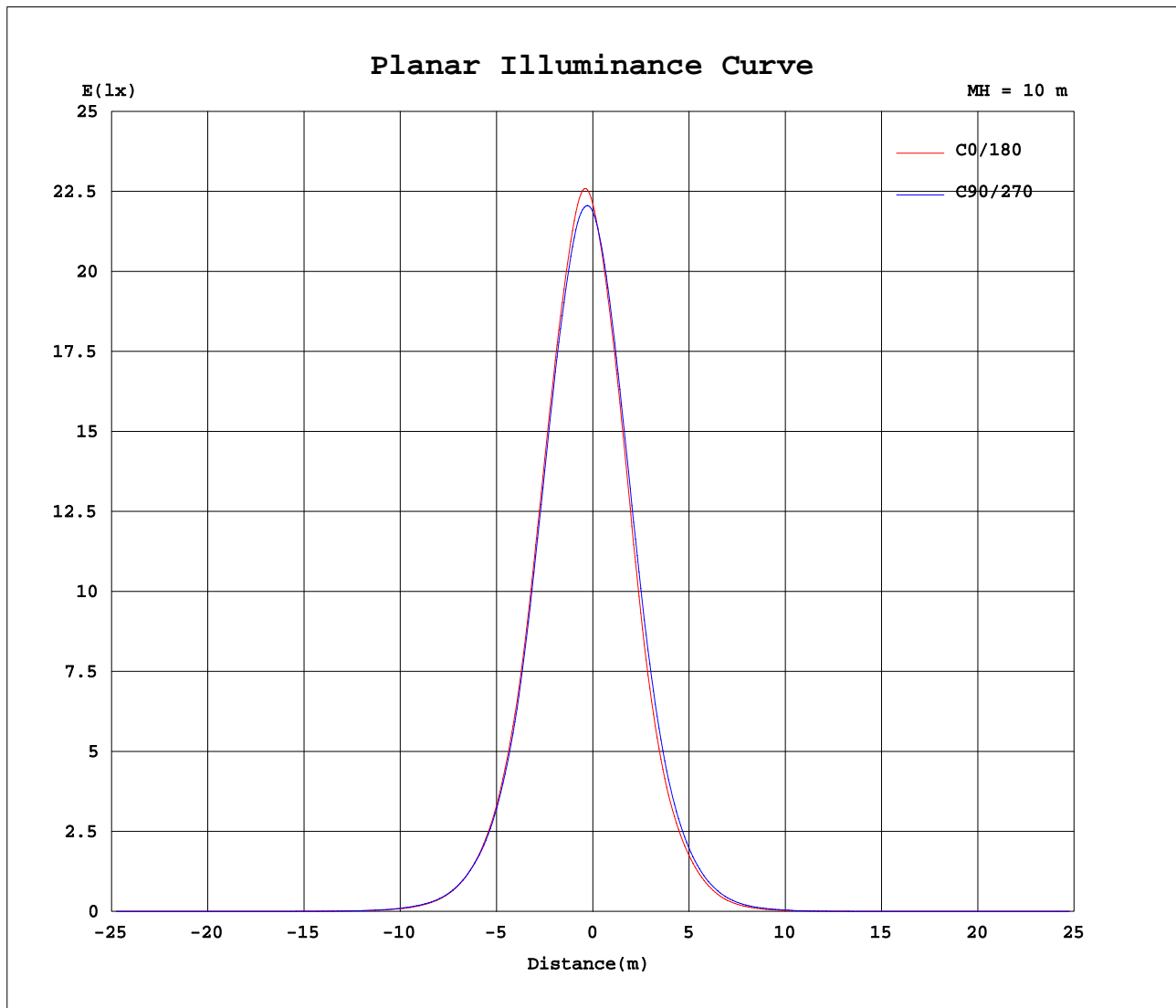


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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: DL3115-2*10W	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	2211	2204	2198	2195	2187	2181	2178	2175	2211	2204	2198	2195	2187	2181	2178	2175			
5	2210	2239	2251	2222	2156	2071	1985	1911	1898	1874	1871	1894	1931	1993	2063	2128			
10	1902	1950	1965	1934	1862	1742	1608	1487	1437	1394	1395	1430	1495	1590	1709	1802			
15	1450	1510	1526	1495	1411	1276	1120	983	924	891	902	946	1011	1113	1246	1348			
20	947	1009	1022	1004	918	814	684	583	536	516	529	561	606	688	786	868			
25	559	590	611	592	538	473	387	325	298	283	286	305	337	388	446	500			
30	302	322	340	324	295	256	199	163	150	142	138	148	173	203	229	270			
35	146	163	170	167	148	122	92.4	73.1	63.1	59.3	59.5	63.6	77.9	94.4	108	131			
40	62.7	73.6	77.3	77.2	66.8	53.2	38.4	30.3	24.7	21.3	22.3	25.3	32.5	38.6	45.4	55.3			
45	25.3	31.6	31.8	30.9	28.7	20.8	15.9	11.5	8.93	7.86	8.00	9.32	13.3	15.6	19.1	23.0			
50	9.81	12.2	12.3	12.6	11.1	8.60	5.76	3.74	3.57	3.29	3.20	3.92	4.43	6.11	7.08	9.32			
55	3.83	3.85	4.21	4.65	4.59	3.33	2.21	1.86	1.80	1.83	1.71	1.65	1.74	2.08	2.93	2.81			
60	1.77	1.95	1.98	1.78	1.66	1.50	1.25	1.01	0.94	1.02	0.94	0.85	0.97	1.17	1.34	1.43			
65	0.97	1.10	1.10	0.91	0.94	0.78	0.67	0.54	0.48	0.55	0.49	0.45	0.53	0.66	0.70	0.81			
70	0.50	0.56	0.58	0.46	0.51	0.39	0.35	0.27	0.24	0.29	0.25	0.25	0.28	0.37	0.37	0.45			
75	0.24	0.24	0.27	0.22	0.25	0.17	0.17	0.12	0.11	0.13	0.11	0.12	0.12	0.19	0.17	0.23			
80	0.12	0.11	0.12	0.10	0.12	0.06	0.08	0.04	0.02	0.05	0.02	0.05	0.04	0.07	0.05	0.10			
85	0.05	0.03	0.06	0.02	0.06	0.01	0.03	0.01	0.01	0.01	0.01	0.02	0.00	0.03	0.00	0.04			
90	0.02	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.01	0.01	0.01			
95	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
100	0.02	0.02	0.01	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
105	0.02	0.03	0.01	0.02	0.01	0.03	0.02	0.04	0.02	0.01	0.02	0.01	0.02	0.01	0.01	0.01			
110	0.02	0.04	0.01	0.04	0.02	0.05	0.04	0.05	0.04	0.01	0.04	0.01	0.04	0.01	0.02	0.01			
115	0.05	0.06	0.05	0.06	0.05	0.08	0.07	0.10	0.07	0.05	0.08	0.05	0.07	0.05	0.05	0.02			
120	0.11	0.11	0.08	0.11	0.11	0.16	0.16	0.21	0.15	0.12	0.16	0.13	0.15	0.10	0.10	0.05			
125	0.21	0.22	0.18	0.24	0.25	0.32	0.34	0.45	0.28	0.27	0.31	0.27	0.28	0.22	0.20	0.14			
130	0.45	0.43	0.38	0.47	0.54	0.66	0.69	0.89	0.51	0.52	0.55	0.52	0.52	0.42	0.37	0.28			
135	0.86	0.83	0.78	0.92	1.07	1.19	1.33	1.64	0.89	0.91	0.96	0.91	0.88	0.75	0.67	0.54			
140	1.61	1.56	1.53	1.63	1.93	2.05	2.45	2.72	1.43	1.47	1.51	1.46	1.40	1.23	1.09	0.93			
145	2.82	2.79	2.73	2.77	3.01	3.51	3.97	4.06	2.06	2.11	2.16	2.10	2.02	1.81	1.65	1.48			
150	4.56	4.37	4.06	4.63	4.55	5.76	5.36	5.78	2.65	2.69	2.76	2.67	2.57	2.36	2.24	2.06			
155	6.96	6.07	5.38	7.05	6.46	8.48	6.16	7.52	3.10	3.09	3.16	3.11	3.02	2.81	2.73	2.58			
160	9.00	7.05	6.90	8.36	9.08	9.24	7.26	8.38	3.38	3.33	3.36	3.36	3.31	3.14	3.01	2.95			
165	8.53	6.61	6.68	9.03	7.56	10.0	6.52	7.41	3.57	3.47	3.48	3.52	3.63	3.27	3.13	3.10			
170	6.89	6.28	6.13	7.27	8.54	6.51	5.98	6.40	3.93	3.82	3.90	3.78	4.12	3.41	3.29	3.30			
175	9.04	7.19	7.16	6.71	6.45	6.28	7.00	6.29	7.02	7.02	8.58	7.92	6.69	7.25	7.16	4.97			
180	12.9	9.30	10.2	7.81	7.78	6.99	9.83	6.65	13.0	9.36	10.2	7.80	7.71	6.95	9.85	6.65			

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: