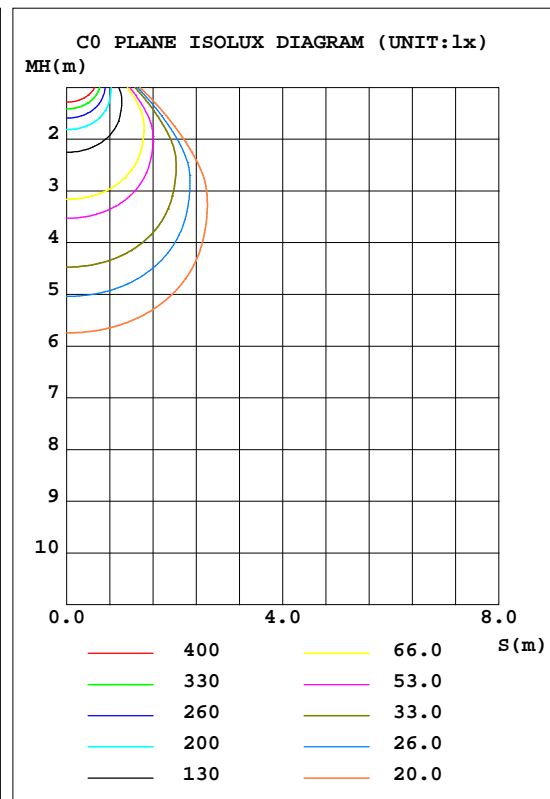
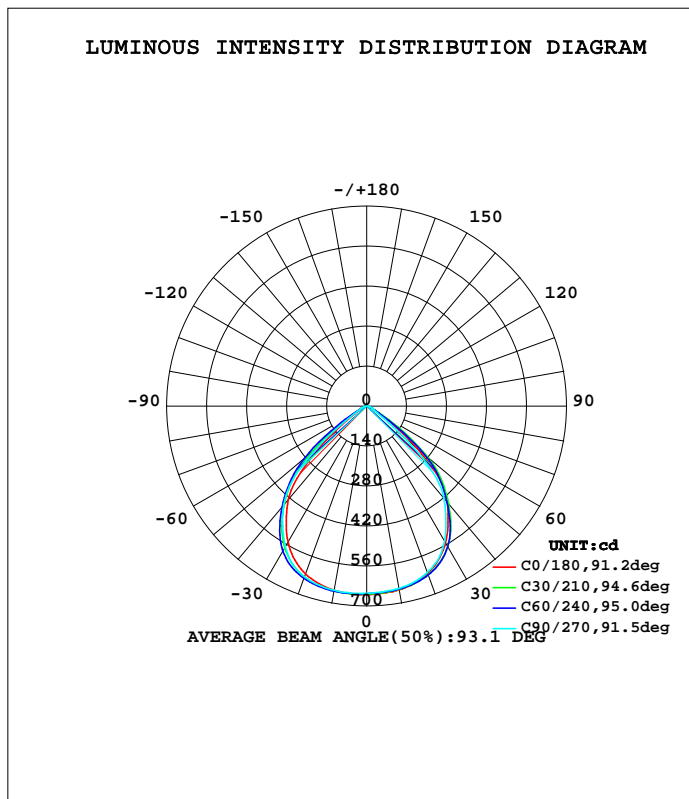


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065X0.065	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 132.88 lm/W			
MODEL	DL96-3-10W	I _{max} (cd)	660.4	S/MH(C0/180)	1.23
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	110	TOTAL FLUX(lm)	1265.0	η UP,DN(C0-180)	0.0,50.7
NOMINAL FLUX(lm)	1265.01	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.3
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	110.1	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [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	655.0	657.8	655.0	650.5	653.5	651.2	648.7	646.7	0- 10	62.46	62.46	4.94,4.94
20	625.6	639.5	636.2	628.0	624.0	629.2	620.1	621.4	10- 20	181.8	244.3	19.3,19.3
30	550.8	580.5	569.6	569.2	552.4	568.2	545.8	558.4	20- 30	277.3	521.6	41.2,41.2
40	427.6	455.2	451.4	451.0	438.7	441.9	420.4	428.5	30- 40	316.4	837.9	66.2,66.2
50	181.7	268.6	223.3	284.9	229.8	274.0	174.0	242.4	40- 50	272.3	1110	87.8,87.8
60	31.71	53.35	35.72	65.39	41.75	57.38	31.94	45.60	50- 60	115.9	1226	96.9,96.9
70	16.21	16.47	15.41	16.83	17.04	17.79	16.98	17.18	60- 70	26.84	1253	99.1,99.1
80	4.502	3.792	3.410	3.636	4.713	4.746	4.667	4.326	70- 80	10.64	1264	99.9,99.9
90	0	0	0	0	0	0	0	0	80- 90	1.360	1265	100,100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

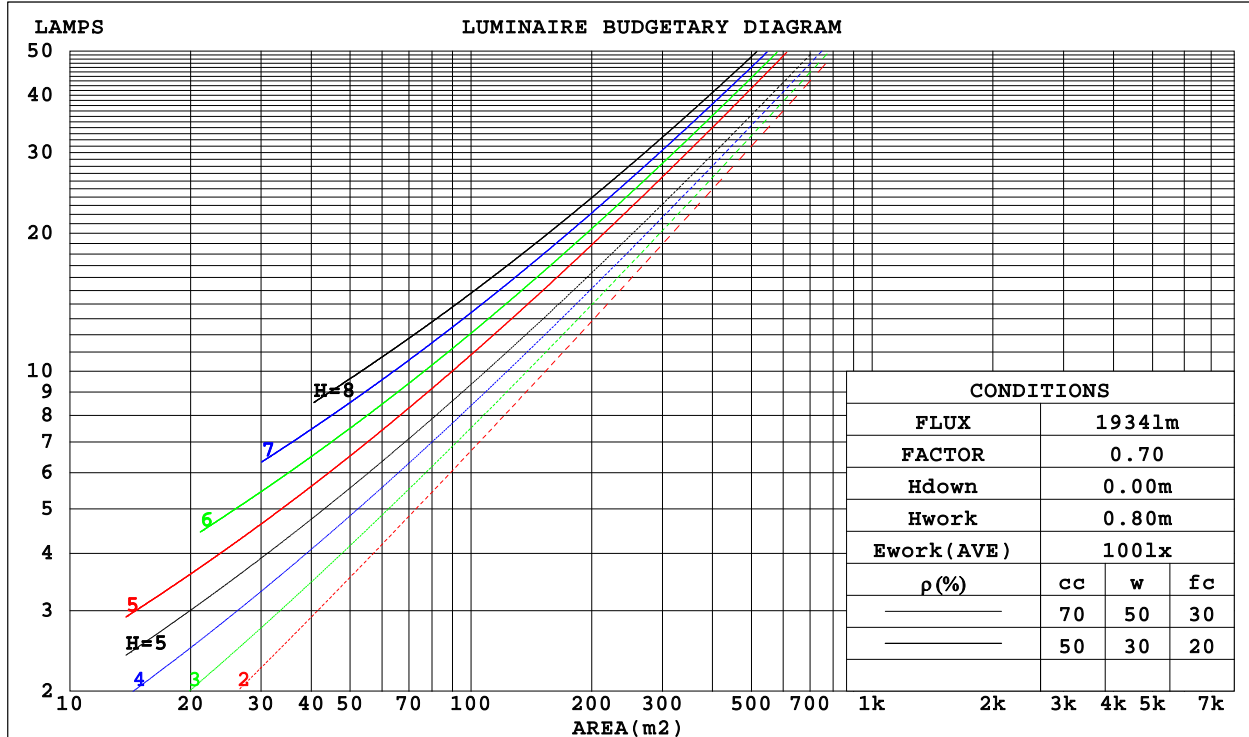
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065X0.065	PROTECTION ANGLE:

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	1.02	1.02	1.02	.00
1.0	1.08	1.05	1.03	1.06	1.03	1.01	1.02	.00	.98	.98	.97	.95	.95	.93	.92	.90
2.0	.98	.93	.89	.96	.92	.88	.93	.89	.86	.90	.87	.84	.87	.84	.82	.80
3.0	.89	.83	.77	.87	.82	.77	.85	.80	.76	.82	.78	.74	.80	.76	.73	.71
4.0	.81	.74	.68	.79	.73	.68	.77	.71	.67	.75	.70	.66	.73	.69	.65	.63
5.0	.73	.66	.61	.72	.65	.60	.70	.64	.60	.69	.63	.59	.67	.62	.59	.57
6.0	.67	.60	.54	.66	.59	.54	.65	.58	.54	.63	.57	.53	.62	.57	.53	.51
7.0	.62	.54	.49	.61	.54	.49	.59	.53	.48	.58	.52	.48	.57	.52	.48	.46
8.0	.57	.49	.44	.56	.49	.44	.55	.48	.44	.54	.48	.44	.53	.47	.43	.42
9.0	.52	.45	.40	.52	.45	.40	.51	.44	.40	.50	.44	.40	.49	.43	.40	.38
10.0	.49	.41	.37	.48	.41	.37	.47	.41	.37	.46	.40	.36	.45	.40	.36	.35



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065X0.065	PROTECTION 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	.222	.127	.040	.216	.123	.039	.203	.116	.037	.191	.110	.035	.180	.104	.034	
2.0	.218	.119	.037	.212	.117	.036	.201	.112	.035	.191	.107	.033	.181	.103	.032	
3.0	.209	.111	.033	.204	.109	.033	.194	.105	.032	.185	.102	.031	.177	.098	.030	
4.0	.199	.103	.030	.195	.102	.030	.186	.099	.029	.178	.096	.029	.171	.093	.028	
5.0	.189	.096	.028	.185	.095	.028	.178	.092	.027	.171	.090	.027	.164	.088	.026	
6.0	.179	.090	.026	.176	.089	.026	.169	.087	.025	.163	.085	.025	.157	.083	.025	
7.0	.170	.084	.024	.167	.083	.024	.161	.081	.023	.155	.080	.023	.150	.078	.023	
8.0	.162	.079	.022	.159	.078	.022	.153	.077	.022	.148	.075	.022	.144	.074	.021	
9.0	.154	.074	.021	.151	.074	.021	.146	.072	.020	.142	.071	.020	.137	.070	.020	
10.0	.146	.070	.019	.144	.069	.019	.139	.068	.019	.135	.067	.019	.131	.066	.019	

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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.174	.157	.141	.149	.135	.122	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.162	.132	.107	.139	.114	.092	.095	.079	.064	.055	.046	.038	.018	.015	.012	
3.0	.153	.114	.083	.131	.098	.072	.090	.068	.050	.052	.040	.030	.017	.013	.010	
4.0	.144	.100	.066	.124	.086	.057	.085	.060	.040	.049	.035	.024	.016	.011	.008	
5.0	.137	.089	.053	.118	.077	.046	.081	.054	.033	.047	.032	.019	.015	.010	.006	
6.0	.131	.080	.044	.112	.069	.038	.077	.049	.027	.045	.029	.016	.015	.009	.005	
7.0	.125	.073	.037	.107	.063	.032	.074	.044	.023	.043	.026	.014	.014	.009	.005	
8.0	.119	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.114	.062	.028	.098	.054	.024	.068	.038	.017	.040	.022	.010	.013	.007	.003	
10.0	.109	.058	.024	.094	.050	.021	.065	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

Uncorrected UGR Table

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm										
NAME: DL96-3-10W					TYPE:10W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:1		
MFR.:					SUR.:0.065x0.065			PROTECTION 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	26.1	27.4	26.4	27.5	27.7	26.7	27.9	26.9	28.1	28.3
3H	26.0	27.1	26.3	27.4	27.6	26.6	27.7	26.8	27.9	28.1
4H	25.9	27.0	26.2	27.3	27.5	26.5	27.6	26.8	27.8	28.0
6H	25.9	26.9	26.2	27.1	27.4	26.4	27.4	26.7	27.7	27.9
8H	25.8	26.8	26.2	27.1	27.3	26.4	27.3	26.7	27.6	27.9
12H	25.8	26.7	26.1	27.0	27.3	26.3	27.2	26.6	27.5	27.8
4H 2H	26.0	27.1	26.3	27.3	27.5	26.5	27.6	26.8	27.8	28.1
3H	25.9	26.8	26.3	27.1	27.4	26.4	27.3	26.8	27.6	27.9
4H	25.9	26.7	26.3	27.0	27.3	26.4	27.2	26.7	27.5	27.8
6H	25.8	26.6	26.2	26.9	27.3	26.3	27.0	26.7	27.4	27.7
8H	25.8	26.5	26.2	26.8	27.2	26.3	26.9	26.7	27.3	27.7
12H	25.8	26.4	26.2	26.7	27.1	26.2	26.8	26.6	27.2	27.6
8H 4H	25.8	26.5	26.2	26.8	27.2	26.3	26.9	26.7	27.3	27.7
6H	25.7	26.3	26.2	26.7	27.1	26.2	26.7	26.6	27.1	27.6
8H	25.7	26.2	26.2	26.6	27.1	26.2	26.6	26.6	27.1	27.5
12H	25.7	26.1	26.1	26.5	27.0	26.1	26.5	26.6	27.0	27.4
12H 4H	25.7	26.4	26.2	26.7	27.1	26.2	26.8	26.6	27.2	27.6
6H	25.7	26.2	26.2	26.6	27.0	26.1	26.6	26.6	27.1	27.5
8H	25.7	26.1	26.1	26.5	27.0	26.1	26.5	26.6	27.0	27.4
Variations with the observer position at spacings:										
S = 1.0H	+ 2.2 / - 5.2					+ 2.1 / - 4.9				
1.5H	+ 1.0 / - 2.9					+ 1.0 / - 2.2				
2.0H	+ 4.3 / - 6.9					+ 4.1 / - 7.5				

CIE Pub.117 Corrected 1265 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.8)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065x0.065	PROTECTION ANGLE:

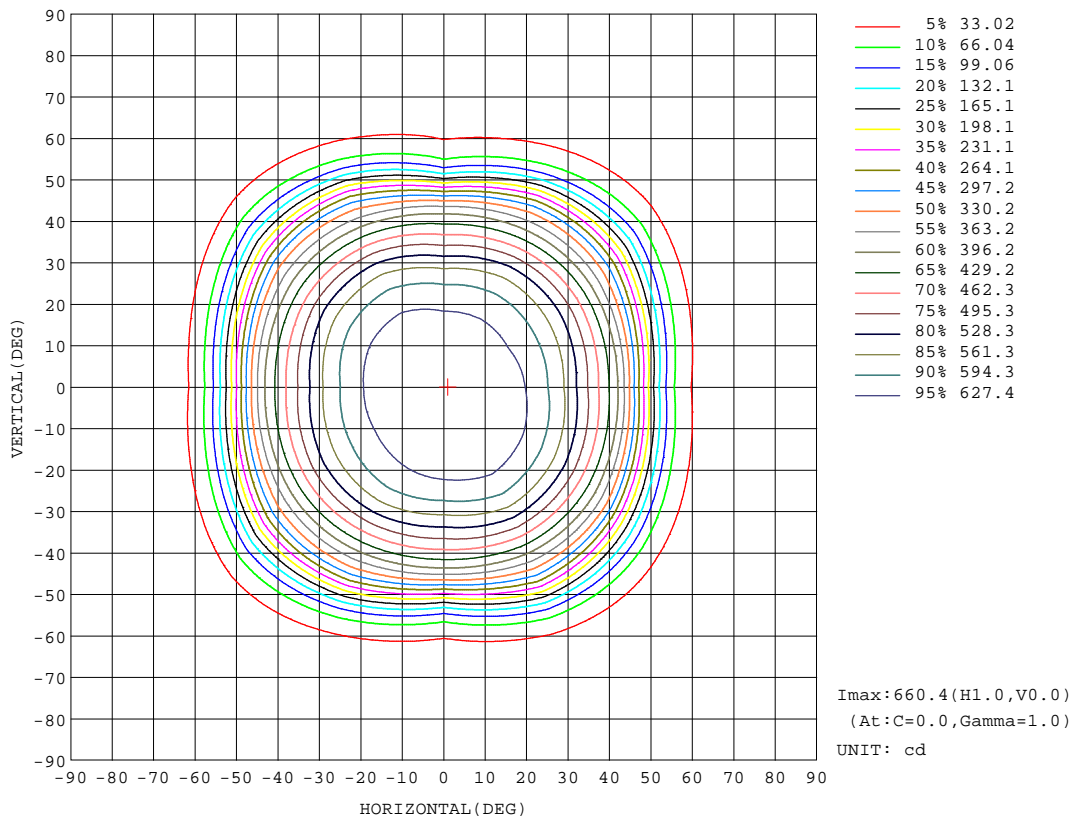
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	70	60	55	69	60	55	68	60	54	49
0.80	80	71	65	79	71	65	78	70	65	59
1.00	88	80	74	87	79	74	85	80	73	68
1.25	94	87	81	93	86	81	91	85	80	75
1.50	98	91	86	97	90	86	94	89	85	79
2.00	103	97	93	102	96	92	99	94	91	84
2.50	106	100	96	104	99	95	101	97	93	86
3.00	108	103	99	106	102	98	102	99	96	89
4.00	111	107	103	108	105	102	105	102	99	92
5.00	112	109	106	110	107	104	106	103	101	93
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.0lx1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065x0.065	PROTECTION ANGLE:



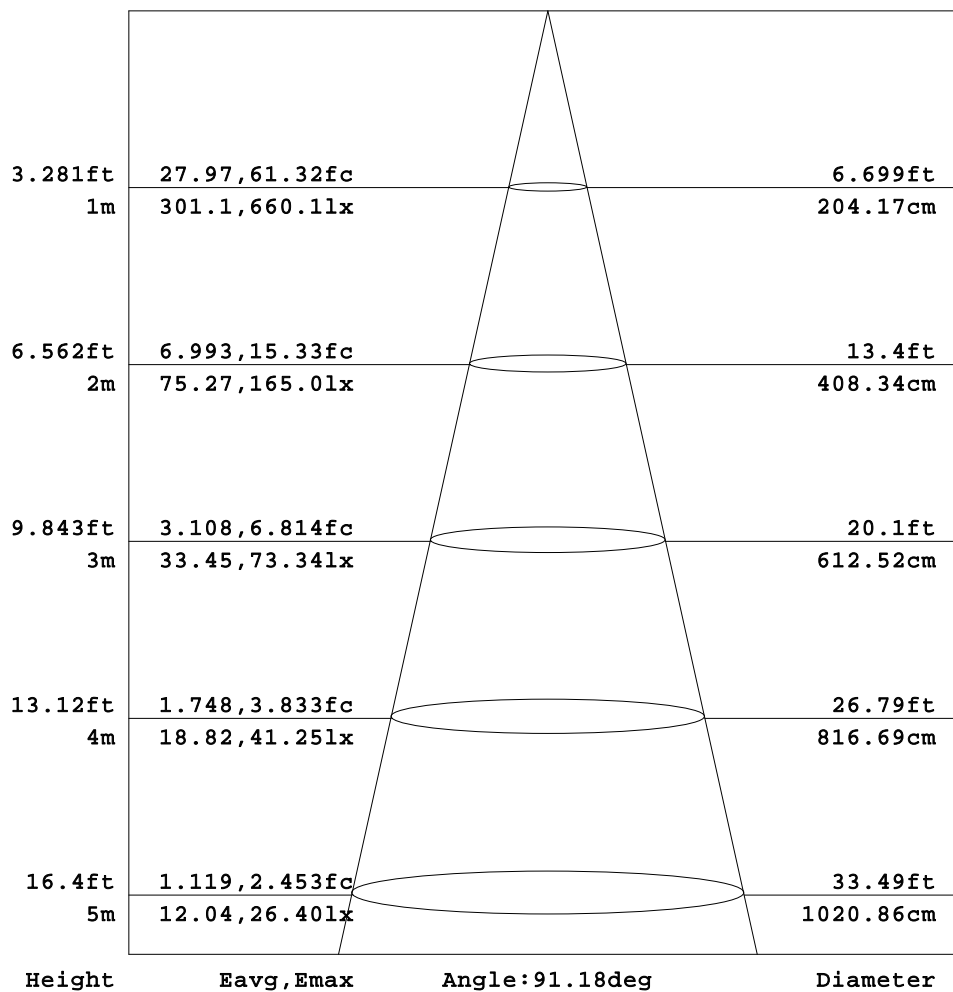
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

AAI Figure

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065x0.065	PROTECTION ANGLE:

Flux out:1014 lm



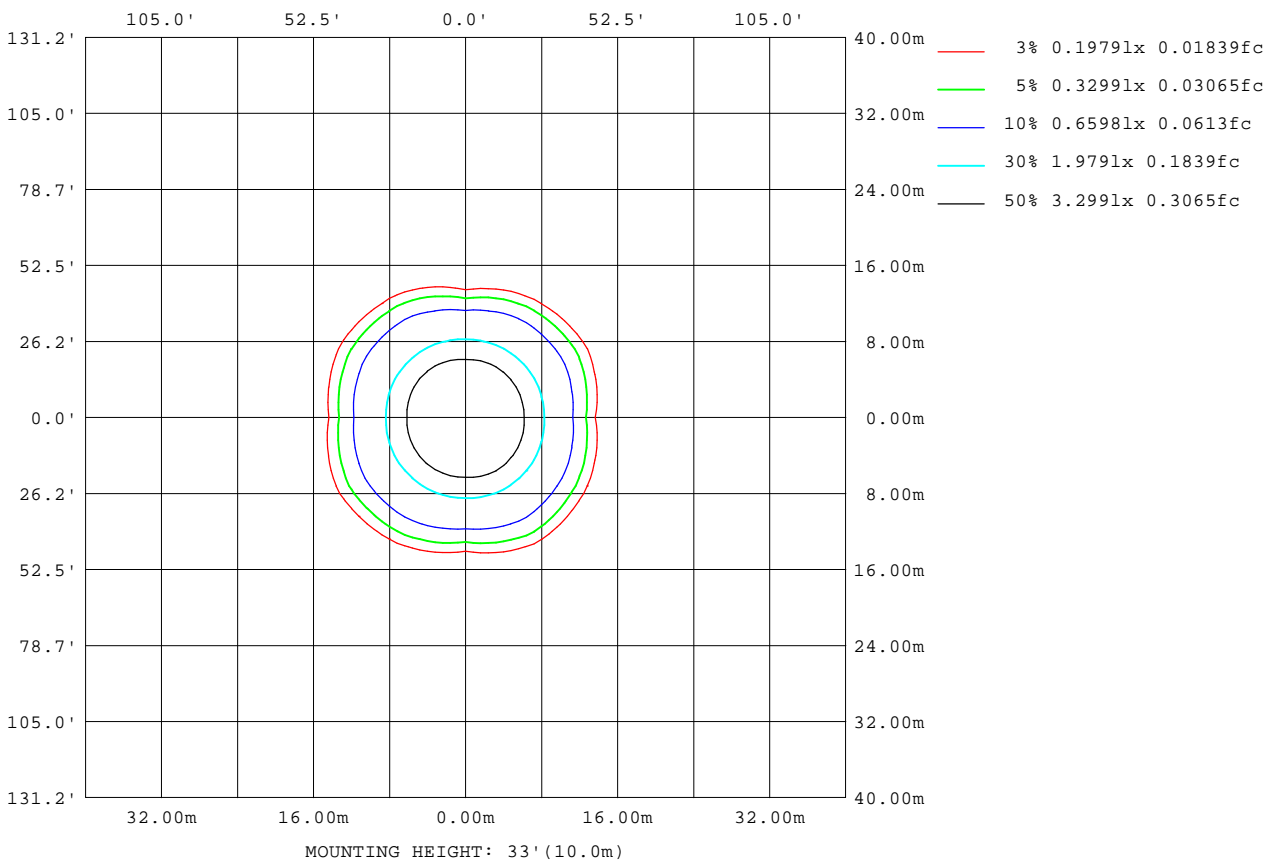
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

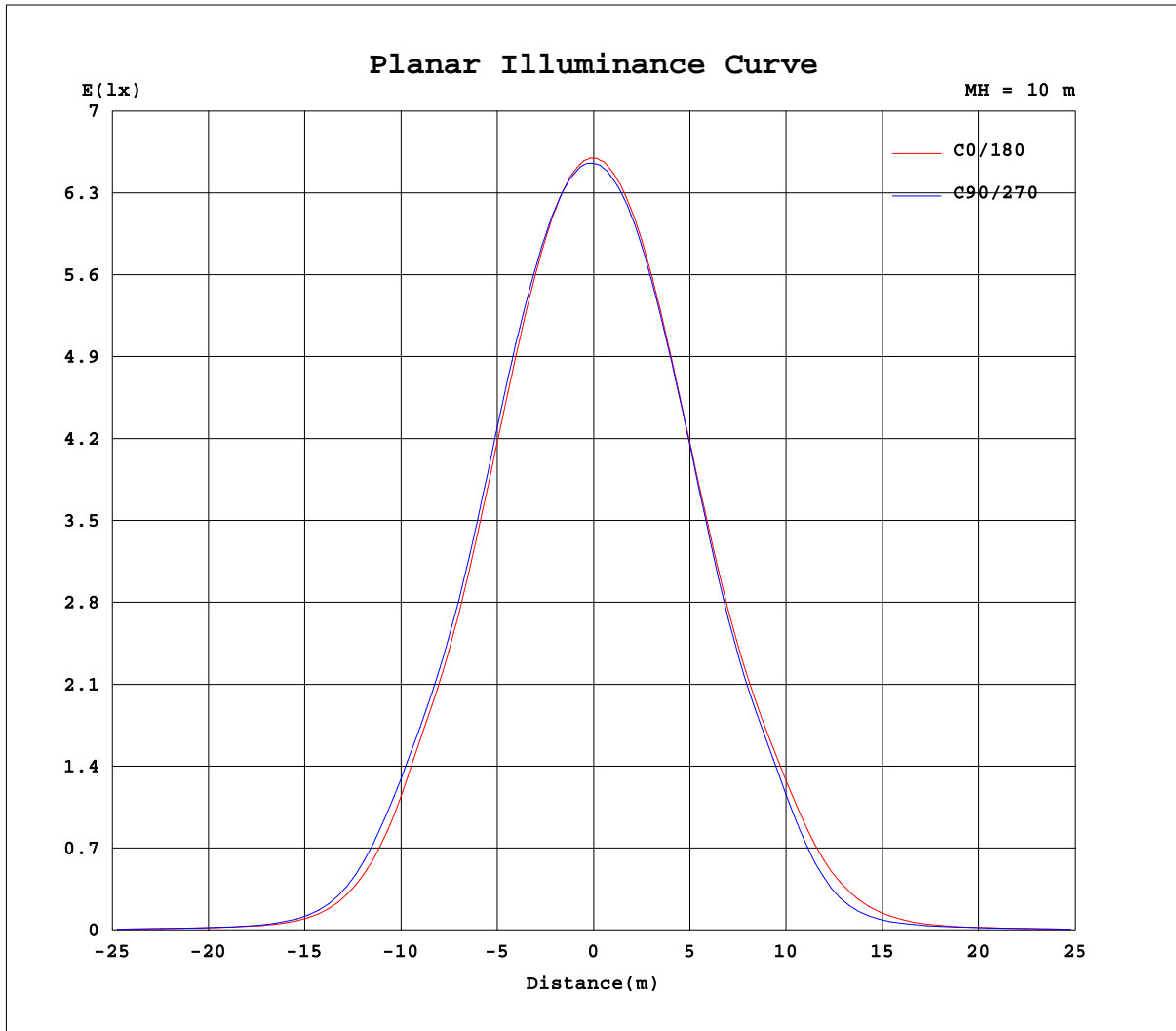
Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065x0.065	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [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: 2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.600m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:110.1V I:0.0880A P:9.520W PF:0.9720 Lamp Flux:1265.01x1 lm		
NAME: DL96-3-10W	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.065x0.065	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330								
0	660	659	657	655	654	653	660	659	657	655	654	653								
5	659	660	659	657	655	653	658	656	654	653	651	652								
10	655	658	658	655	652	649	653	652	651	649	647	647								
15	644	651	653	649	644	640	643	644	643	638	639	636								
20	626	637	642	636	631	625	624	629	629	620	622	620								
25	595	612	622	612	610	601	594	605	607	592	598	596								
30	551	574	587	570	574	565	552	568	568	546	560	557								
35	492	519	531	513	518	515	497	514	510	484	499	502								
40	428	449	461	451	452	450	439	447	437	420	427	430								
45	324	369	383	366	378	376	362	374	362	328	350	350								
50	182	251	286	223	281	288	230	281	267	174	240	245								
55	74.8	127	156	91.3	151	170	109	156	134	65.4	108	128								
60	31.7	48.5	58.2	35.7	57.2	73.6	41.7	64.3	50.5	31.9	41.3	49.9								
65	22.4	24.0	25.0	22.5	25.0	28.0	23.9	26.7	25.9	23.2	24.4	24.6								
70	16.2	16.6	16.3	15.4	16.4	17.2	17.0	17.8	17.8	17.0	17.4	16.9								
75	9.80	10.1	8.79	8.70	8.86	10.3	10.1	10.9	10.7	10.2	10.2	10.4								
80	4.50	4.66	2.93	3.41	2.58	4.69	4.71	5.15	4.34	4.67	3.74	4.91								
85	0.91	0.77	0.42	0.34	0.32	0.87	1.04	1.20	1.04	0.90	0.82	1.01								
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								

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-08-23

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.600m [K=1.0000]
 Remarks: