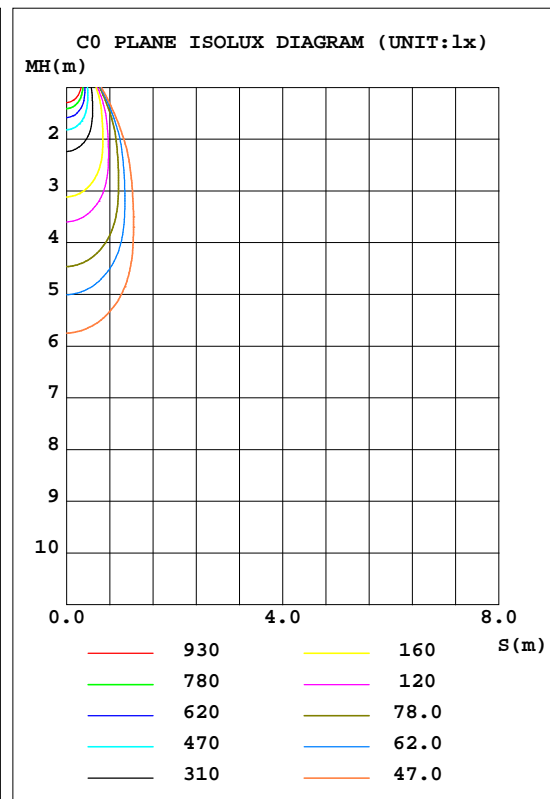
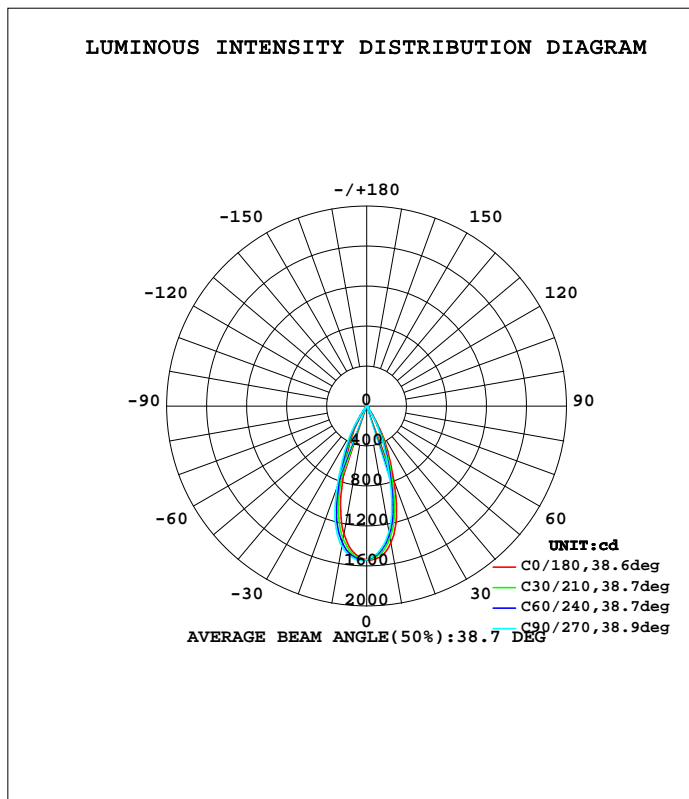


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 71.42 lm/W			
MODEL	CL76-3-10W-D	I <sub>max</sub> (cd)	1546	S/MH(C0/180)	0.60
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.67
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	714.22	η UP, DN(C0-180)	0.0, 54.0
NOMINAL FLUX(lm)	714.22	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 46.0
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE(V)	240.1	η down(%)	100.0	CIBSE SHR MAX	0.65



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2018-11-23

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:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	\$lum,lamp
10	1307	1373	1426	1430	1393	1325	1278	1276	0- 10	138.0	138.0	19.3,19.3
20	647.8	766.0	872.6	870.0	796.3	686.9	608.4	596.8	10- 20	293.8	431.8	60.5,60.5
30	182.1	260.8	324.4	326.4	275.0	200.3	160.2	148.1	20- 30	206.7	638.5	89.4,89.4
40	16.27	17.93	19.31	19.40	18.76	17.09	15.89	15.86	30- 40	50.64	689.2	96.5,96.5
50	9.842	10.70	11.32	11.42	11.01	10.15	9.558	9.523	40- 50	10.40	699.6	97.9,97.9
60	5.821	6.297	6.675	6.692	6.212	5.655	5.474	5.615	50- 60	7.207	706.8	99,99
70	3.505	3.650	3.713	3.694	3.435	3.164	3.164	3.429	60- 70	4.583	711.4	99.6,99.6
80	1.274	1.654	1.826	1.396	1.523	1.004	0.5980	0.4848	70- 80	2.635	714.0	100,100
90	0	0	0	0	0	0	0	0	80- 90	0.2290	714.2	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		

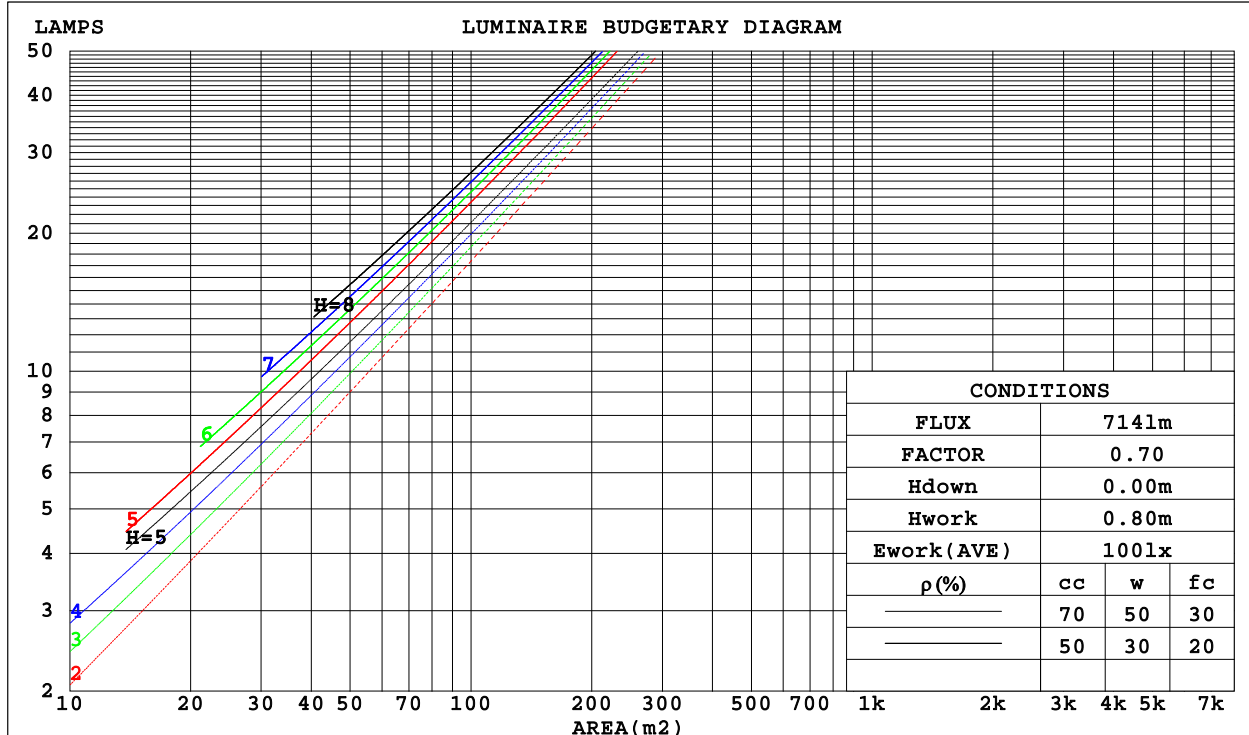
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	PROTECTION ANGLE:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	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	1.00
1.0	1.12	1.10	1.08	1.10	1.08	1.06	1.06	1.04	1.03	1.02	1.01	.00	.99	.98	.97	.95
2.0	1.05	1.02	.99	1.04	1.00	.98	1.00	.98	.96	.98	.95	.94	.95	.93	.92	.90
3.0	.00	.95	.92	.98	.94	.91	.96	.92	.90	.93	.91	.88	.91	.89	.87	.86
4.0	.94	.90	.86	.93	.89	.86	.91	.88	.85	.89	.86	.84	.88	.85	.83	.81
5.0	.90	.85	.81	.89	.84	.81	.87	.83	.80	.86	.82	.80	.84	.81	.79	.78
6.0	.86	.81	.77	.85	.80	.77	.84	.79	.76	.82	.79	.76	.81	.78	.75	.74
7.0	.82	.77	.73	.81	.77	.73	.80	.76	.73	.79	.75	.72	.78	.75	.72	.71
8.0	.78	.73	.70	.78	.73	.70	.77	.73	.70	.76	.72	.69	.75	.72	.69	.68
9.0	.75	.70	.67	.75	.70	.67	.74	.70	.67	.73	.69	.66	.72	.69	.66	.65
10.0	.72	.67	.64	.72	.67	.64	.71	.67	.64	.70	.66	.64	.70	.66	.64	.62



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	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	.158	.090	.029	.152	.087	.028	.139	.080	.026	.128	.074	.024	.117	.068	.022	
2.0	.149	.082	.025	.144	.079	.024	.133	.074	.023	.124	.069	.022	.115	.065	.020	
3.0	.140	.075	.022	.136	.073	.022	.127	.069	.021	.119	.065	.020	.111	.062	.019	
4.0	.133	.069	.020	.129	.067	.020	.121	.064	.019	.114	.061	.018	.108	.058	.018	
5.0	.126	.064	.019	.122	.063	.018	.116	.060	.018	.110	.058	.017	.104	.056	.017	
6.0	.119	.060	.017	.116	.059	.017	.111	.057	.017	.106	.055	.016	.101	.053	.016	
7.0	.114	.056	.016	.111	.055	.016	.106	.054	.015	.102	.052	.015	.097	.051	.015	
8.0	.109	.053	.015	.107	.052	.015	.102	.051	.015	.098	.050	.014	.094	.048	.014	
9.0	.104	.050	.014	.102	.050	.014	.098	.049	.014	.095	.047	.014	.091	.046	.013	
10.0	.100	.048	.013	.098	.047	.013	.095	.046	.013	.091	.045	.013	.088	.044	.013	

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	.170	.157	.146	.145	.135	.126	.099	.093	.087	.057	.054	.051	.018	.017	.016	
2.0	.153	.133	.115	.131	.114	.100	.090	.079	.070	.052	.046	.041	.017	.015	.013	
3.0	.140	.113	.093	.120	.098	.080	.082	.068	.056	.047	.040	.033	.015	.013	.011	
4.0	.128	.098	.076	.110	.085	.066	.076	.059	.046	.044	.035	.027	.014	.011	.009	
5.0	.118	.086	.063	.102	.075	.055	.070	.052	.039	.041	.031	.023	.013	.010	.008	
6.0	.110	.077	.053	.095	.066	.046	.065	.047	.032	.038	.027	.019	.012	.009	.006	
7.0	.103	.069	.045	.089	.060	.039	.061	.042	.028	.036	.025	.016	.012	.008	.005	
8.0	.097	.062	.039	.084	.054	.034	.058	.038	.024	.034	.022	.014	.011	.007	.005	
9.0	.092	.057	.033	.079	.049	.029	.055	.035	.021	.032	.021	.012	.010	.007	.004	
10.0	.087	.052	.029	.075	.046	.026	.052	.032	.018	.030	.019	.011	.010	.006	.004	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

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:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm										
NAME: CL76-3-10W-D					TYPE:10W			WEIGHT:		
DIM.:					SPEC.:2700K			SERIAL No.:1		
MFR.:					SUR.:0.025			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	15.6	16.4	15.8	16.5	16.7	18.6	19.4	18.9	19.6	19.8
3H	16.0	16.8	16.3	17.0	17.1	18.8	19.5	19.0	19.7	19.9
4H	16.3	17.0	16.6	17.2	17.4	18.9	19.6	19.1	19.8	20.0
6H	16.5	17.2	16.8	17.4	17.7	18.9	19.6	19.2	19.8	20.1
8H	16.5	17.1	16.8	17.4	17.6	18.9	19.6	19.2	19.8	20.1
12H	16.5	17.1	16.8	17.3	17.6	18.9	19.5	19.2	19.8	20.0
4H 2H	15.7	16.4	16.0	16.6	16.8	18.6	19.3	18.8	19.5	19.7
3H	16.3	16.9	16.6	17.2	17.5	18.8	19.4	19.1	19.6	19.9
4H	16.7	17.3	17.1	17.6	17.9	18.9	19.5	19.3	19.8	20.1
6H	17.1	17.6	17.5	17.9	18.3	19.1	19.6	19.5	19.9	20.3
8H	17.1	17.5	17.5	17.9	18.2	19.1	19.6	19.5	19.9	20.3
12H	17.0	17.4	17.4	17.8	18.2	19.1	19.5	19.5	19.8	20.2
8H 4H	16.9	17.3	17.3	17.7	18.0	18.9	19.4	19.3	19.7	20.1
6H	17.3	17.7	17.8	18.1	18.5	19.1	19.5	19.6	19.9	20.3
8H	17.3	17.6	17.7	18.0	18.5	19.2	19.5	19.6	19.9	20.4
12H	17.2	17.5	17.7	18.0	18.4	19.1	19.4	19.6	19.8	20.3
12H 4H	16.8	17.3	17.3	17.6	18.0	18.9	19.3	19.3	19.7	20.1
6H	17.3	17.7	17.8	18.1	18.5	19.1	19.4	19.6	19.9	20.3
8H	17.3	17.6	17.8	18.0	18.5	19.2	19.4	19.6	19.9	20.3
Variations with the observer position at spacings:										
S = 1.0H	+ 0.3 / - 0.5					+ 1.8 / - 0.8				
1.5H	+ 0.3 / - 0.4					+ 3.1 / - 0.5				
2.0H	+ 0.5 / - 0.6					+ 0.6 / - 0.5				

CIE Pub.117 Corrected 714.2 lm Total Lamp Luminous Flux.(8log(F/F0) = -1.2)

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

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:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	PROTECTION ANGLE:

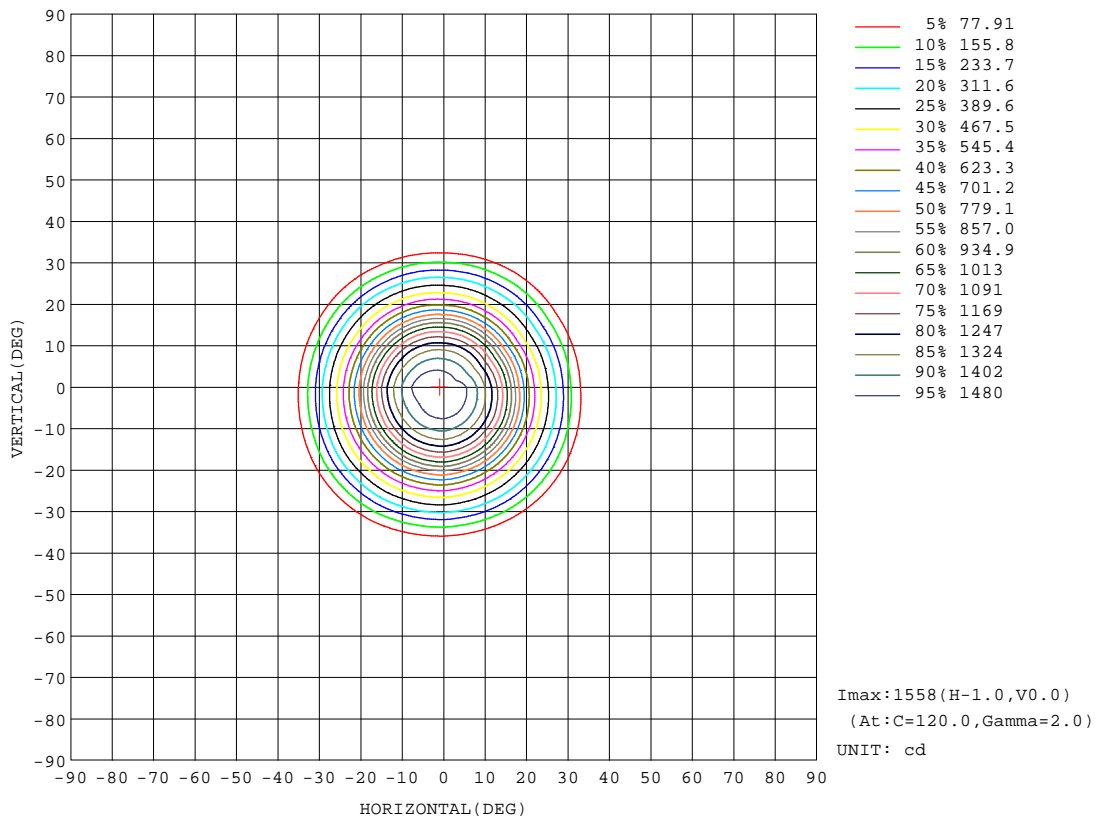
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) k(RI) x RCR = 5									
k = 0.60	89	83	80	89	83	80	88	83	80	76
0.80	96	91	88	96	91	87	95	90	87	84
1.00	100	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	104	101	96
3.00	112	109	106	110	108	105	107	105	103	97
4.00	114	112	109	112	110	108	109	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: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

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:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	PROTECTION ANGLE:



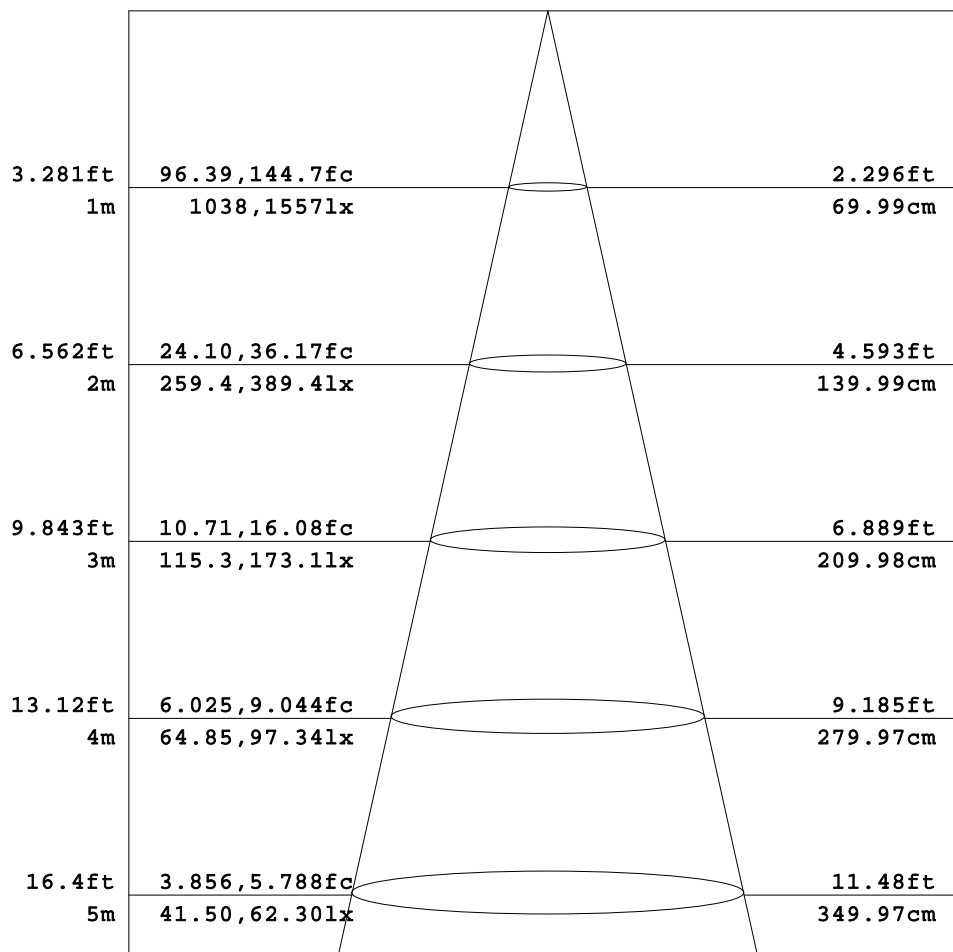
C Range: 0 - 360DEG  
C Interval: 30.0DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:DAMIN  
Test Date:2018-11-23

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:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	PROTECTION ANGLE:

Flux out:431.8 lm



Height Eavg, Emax Angle:38.58deg Diameter

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

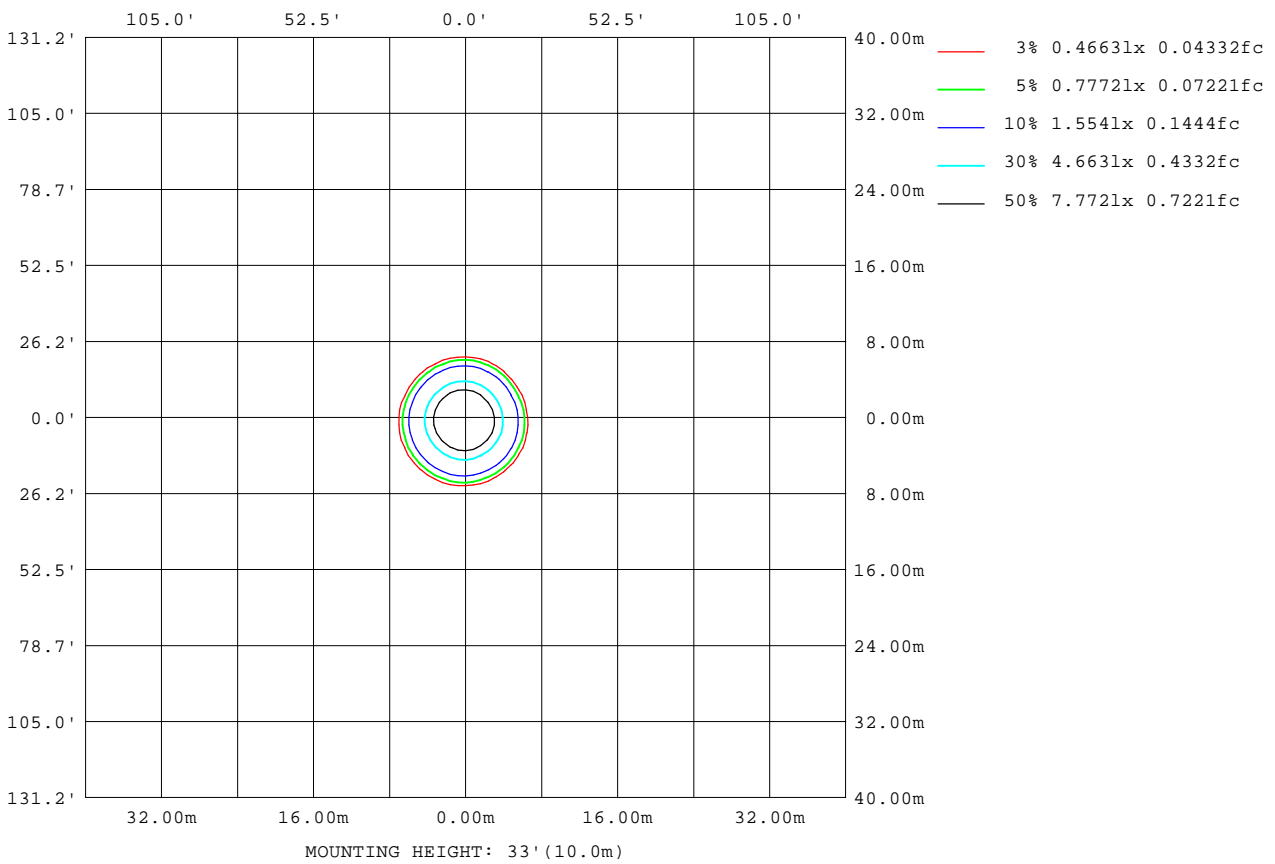
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

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

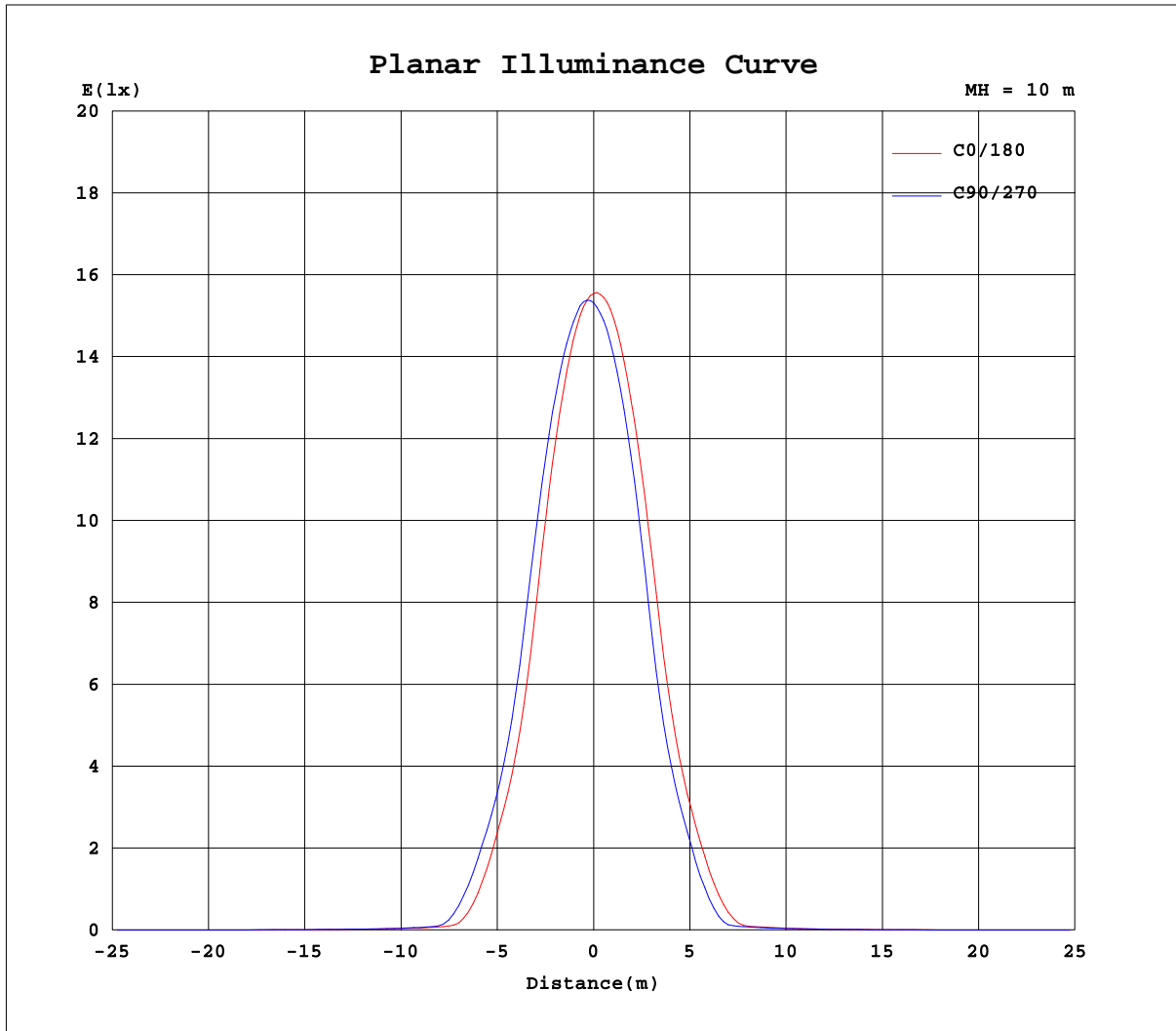
Test:U:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

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: 2018-11-23

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  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:240.1V I:0.0440A P:10.00W PF:0.9400 Lamp Flux:714.22x1 lm		
NAME: CL76-3-10W-D	TYPE:10W	WEIGHT:
DIM.:	SPEC.:2700K	SERIAL No.:1
MFR.:	SUR.:0.025	PROTECTION ANGLE:

Table--1

UNIT: cd

C( DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537							
5	1474	1495	1511	1527	1531	1529	1517	1489	1471	1456	1455	1458							
10	1307	1352	1394	1426	1432	1428	1393	1344	1307	1278	1274	1277							
15	1016	1100	1166	1212	1221	1203	1155	1083	1021	972	956	961							
20	648	727	805	873	880	860	796	718	656	608	595	599							
25	394	444	496	548	559	545	501	440	400	371	357	359							
30	182	236	285	324	334	319	275	220	181	160	149	147							
35	31.9	56.8	82.5	110	117	108	78.9	46.3	30.5	24.6	23.4	23.0							
40	16.3	17.5	18.4	19.3	19.2	19.6	18.8	17.5	16.6	15.9	15.7	16.0							
45	12.5	13.2	13.8	14.3	14.2	14.6	14.1	13.4	12.9	12.3	12.1	12.5							
50	9.84	10.5	10.9	11.3	11.3	11.5	11.0	10.4	9.85	9.56	9.48	9.56							
55	7.56	8.06	8.47	8.83	8.86	8.87	8.30	7.67	7.34	7.26	7.21	7.39							
60	5.82	6.16	6.44	6.68	6.70	6.68	6.21	5.75	5.56	5.47	5.52	5.71							
65	4.48	4.70	4.86	4.98	4.97	4.97	4.61	4.28	4.13	4.12	4.24	4.43							
70	3.51	3.62	3.68	3.71	3.70	3.69	3.43	3.21	3.12	3.16	3.33	3.53							
75	2.75	2.85	2.60	2.81	2.58	2.75	2.58	2.42	2.08	2.33	2.48	2.66							
80	1.27	1.81	1.50	1.83	1.06	1.74	1.52	1.20	0.80	0.60	0.17	0.80							
85	0.00	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							

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2018-11-23

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: