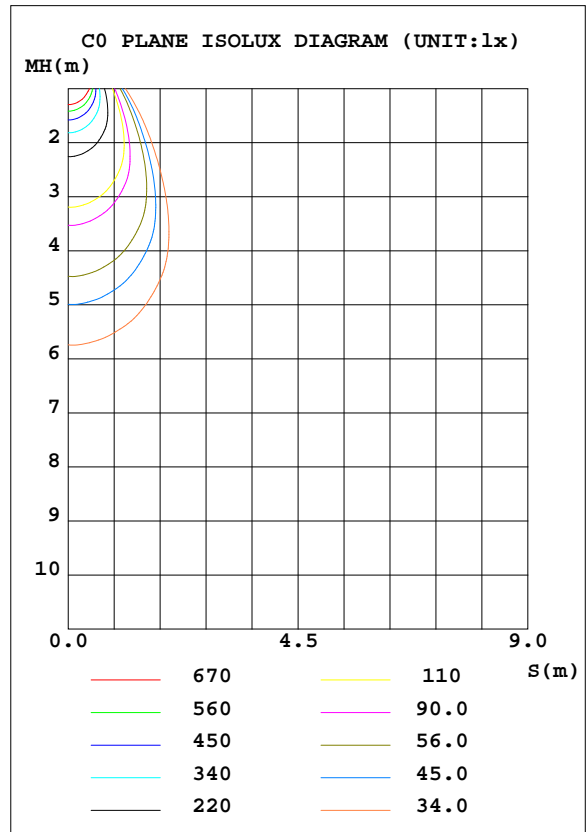
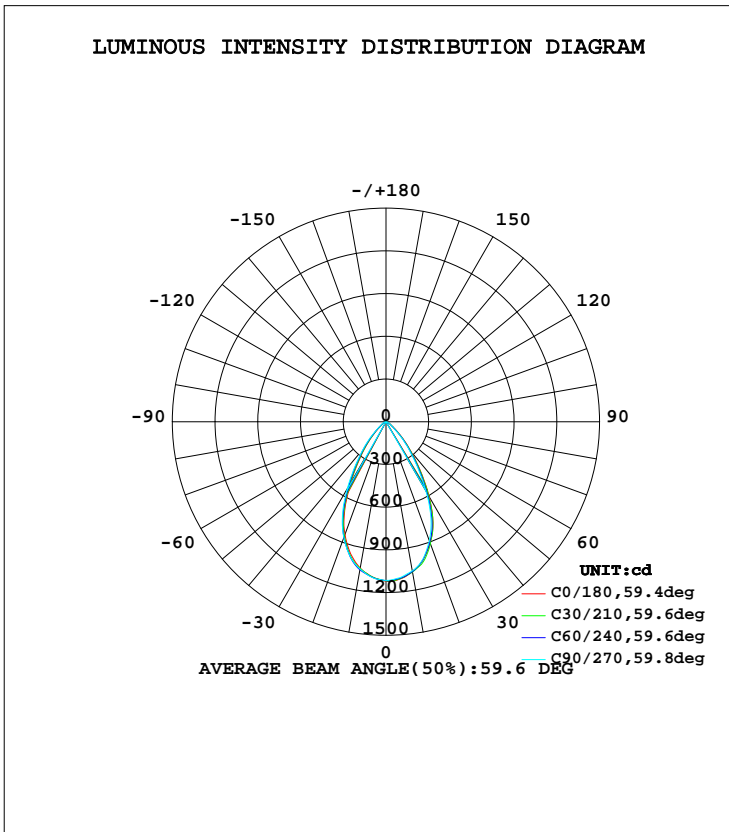


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm		
NAME: CD10W-NW-B	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.03	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 108.71 lm/W			
MODEL	CD10W-NW-B	I _{max} (cd)	1123	S/MH(C0/180)	0.93
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	0.90
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	1130.5	η UP, DN(C0-180)	0.0, 50.5
NOMINAL FLUX(lm)	1130.55	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 49.5
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75
TEST VOLTAGE(V)	240.3	η down(%)	100.0	CIBSE SHR MAX	0.90



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-10-15

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	Φ lum,lamp
10	1068	1070	1063	1045	1044	1051	1050	1056	0- 10	103.5	103.5	9.16,9.16
20	906.4	905.6	890.3	847.8	843.8	860.3	867.2	888.3	10- 20	274.5	378.0	33.4,33.4
30	605.0	587.9	561.1	505.7	496.4	517.9	545.4	587.2	20- 30	331.3	709.3	62.7,62.7
40	275.4	261.8	246.6	220.8	212.3	226.7	246.3	268.9	30- 40	237.7	947.1	83.8,83.8
50	92.74	83.87	74.61	64.73	61.08	68.23	77.89	89.16	40- 50	114.5	1062	93.9,93.9
60	33.95	32.49	30.33	27.11	26.32	28.10	30.39	33.45	50- 60	42.11	1104	97.6,97.6
70	15.18	14.21	12.81	10.93	10.25	11.09	12.47	14.61	60- 70	20.73	1124	99.5,99.5
80	1.590	1.100	0.4513	0.0007	0	0.0485	0.4593	1.287	70- 80	6.094	1130	100,100
90	0	0	0	0	0	0	0	0	80- 90	0.0598	1131	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		

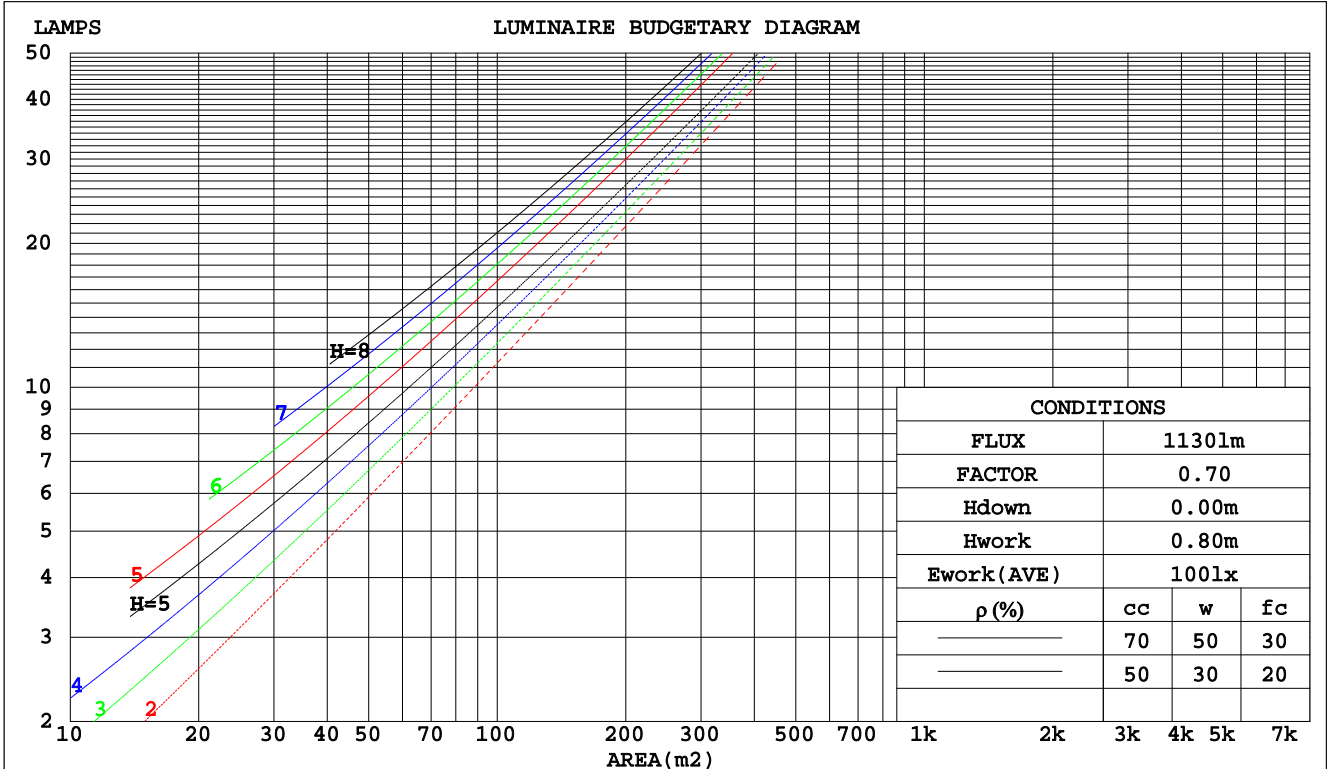
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-10-15

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:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm		
NAME: CD10W-NW-B	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.03	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						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	1.10	1.07	1.05	1.08	1.05	1.03	1.04	1.02	.00	.00	.98	.97	.97	.95	.94	.92
2.0	1.01	.97	.93	.00	.96	.92	.96	.93	.90	.93	.91	.88	.91	.88	.86	.85
3.0	.94	.88	.84	.92	.87	.83	.90	.85	.82	.87	.84	.81	.85	.82	.79	.78
4.0	.87	.81	.76	.86	.80	.76	.83	.79	.75	.81	.77	.74	.79	.76	.73	.71
5.0	.81	.74	.70	.80	.74	.69	.78	.73	.69	.76	.72	.68	.75	.71	.67	.66
6.0	.75	.69	.64	.74	.68	.64	.73	.67	.63	.71	.67	.63	.70	.66	.62	.61
7.0	.70	.64	.59	.70	.63	.59	.68	.63	.59	.67	.62	.58	.66	.61	.58	.57
8.0	.66	.59	.55	.65	.59	.55	.64	.59	.55	.63	.58	.54	.62	.58	.54	.53
9.0	.62	.56	.51	.61	.55	.51	.60	.55	.51	.59	.54	.51	.59	.54	.51	.49
10.0	.58	.52	.48	.58	.52	.48	.57	.52	.48	.56	.51	.48	.55	.51	.47	.46



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2018-10-15

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:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm		
NAME: CD10W-NW-B	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.03	PROTECTION ANGLE:

ρcc	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	.193	.110	.035	.187	.106	.034	.174	.100	.032	.162	.094	.030	.152	.088	.028	
2.0	.187	.102	.031	.181	.100	.031	.170	.095	.029	.161	.090	.028	.151	.086	.027	
3.0	.178	.095	.028	.173	.093	.028	.164	.089	.027	.156	.085	.026	.148	.082	.025	
4.0	.170	.088	.026	.165	.087	.026	.157	.083	.025	.150	.080	.024	.143	.078	.024	
5.0	.161	.082	.024	.158	.081	.024	.151	.078	.023	.144	.076	.023	.138	.074	.022	
6.0	.153	.077	.022	.150	.076	.022	.144	.074	.021	.138	.072	.021	.133	.070	.021	
7.0	.146	.072	.020	.143	.071	.020	.138	.070	.020	.132	.068	.020	.128	.066	.019	
8.0	.139	.068	.019	.137	.067	.019	.132	.066	.019	.127	.064	.019	.123	.063	.018	
9.0	.133	.064	.018	.131	.064	.018	.126	.062	.018	.122	.061	.018	.118	.060	.017	
10.0	.127	.061	.017	.125	.060	.017	.121	.059	.017	.117	.058	.017	.114	.057	.016	

ρcc	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	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.172	.157	.144	.147	.135	.124	.101	.093	.085	.058	.054	.050	.019	.017	.016	
2.0	.158	.132	.111	.136	.114	.096	.093	.079	.067	.054	.046	.039	.017	.015	.013	
3.0	.147	.114	.087	.126	.098	.076	.086	.068	.053	.050	.040	.031	.016	.013	.010	
4.0	.137	.099	.070	.118	.086	.061	.081	.060	.043	.047	.035	.025	.015	.011	.008	
5.0	.129	.088	.057	.111	.076	.050	.076	.053	.035	.044	.031	.021	.014	.010	.007	
6.0	.122	.079	.048	.105	.068	.042	.072	.048	.029	.042	.028	.018	.014	.009	.006	
7.0	.116	.071	.040	.099	.062	.035	.069	.043	.025	.040	.026	.015	.013	.008	.005	
8.0	.110	.065	.035	.095	.057	.030	.065	.040	.021	.038	.023	.013	.012	.008	.004	
9.0	.105	.060	.030	.090	.052	.026	.062	.037	.019	.036	.022	.011	.012	.007	.004	
10.0	.100	.056	.026	.086	.048	.023	.060	.034	.016	.035	.020	.010	.011	.007	.003	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-10-15

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:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm										
NAME: CD10W-NW-B					TYPE:10W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:1		
MFR.:					SUR.:0.03			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	23.8	24.8	24.0	25.0	25.2	23.3	24.3	23.5	24.5	24.7
3H	23.9	24.8	24.1	25.0	25.2	23.3	24.3	23.6	24.5	24.7
4H	23.8	24.7	24.1	25.0	25.2	23.3	24.2	23.6	24.4	24.7
6H	23.8	24.6	24.1	24.9	25.1	23.2	24.1	23.5	24.3	24.6
8H	23.7	24.5	24.0	24.8	25.1	23.2	24.0	23.5	24.2	24.5
12H	23.7	24.5	24.0	24.7	25.0	23.1	23.9	23.4	24.2	24.4
4H 2H	23.7	24.6	24.0	24.8	25.0	23.2	24.1	23.5	24.3	24.6
3H	23.8	24.6	24.1	24.9	25.2	23.3	24.1	23.6	24.4	24.7
4H	23.8	24.5	24.2	24.8	25.1	23.3	24.0	23.7	24.3	24.6
6H	23.8	24.4	24.1	24.7	25.1	23.2	23.8	23.6	24.2	24.5
8H	23.7	24.3	24.1	24.6	25.0	23.2	23.7	23.6	24.1	24.5
12H	23.7	24.2	24.1	24.6	25.0	23.1	23.6	23.5	24.0	24.4
8H 4H	23.7	24.3	24.1	24.7	25.0	23.2	23.8	23.6	24.1	24.5
6H	23.7	24.1	24.1	24.5	24.9	23.1	23.6	23.6	24.0	24.4
8H	23.6	24.0	24.1	24.4	24.9	23.1	23.5	23.5	23.9	24.3
12H	23.6	23.9	24.0	24.4	24.8	23.0	23.4	23.5	23.8	24.3
12H 4H	23.7	24.2	24.1	24.6	25.0	23.2	23.7	23.6	24.1	24.5
6H	23.6	24.0	24.1	24.4	24.9	23.1	23.5	23.5	23.9	24.4
8H	23.6	23.9	24.0	24.4	24.8	23.0	23.4	23.5	23.8	24.3
Variations with the observer position at spacings:										
S = 1.0H	+ 1.9 / - 3.7					+ 1.9 / - 4.0				
1.5H	+ 3.1 / - 3.4					+ 3.0 / - 3.3				
2.0H	+ 4.2 / - 2.9					+ 3.9 / - 2.6				

CIE Pub.117 Corrected 1131 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.4)

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-10-15

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:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm		
NAME: CD10W-NW-B	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.03	PROTECTION ANGLE:

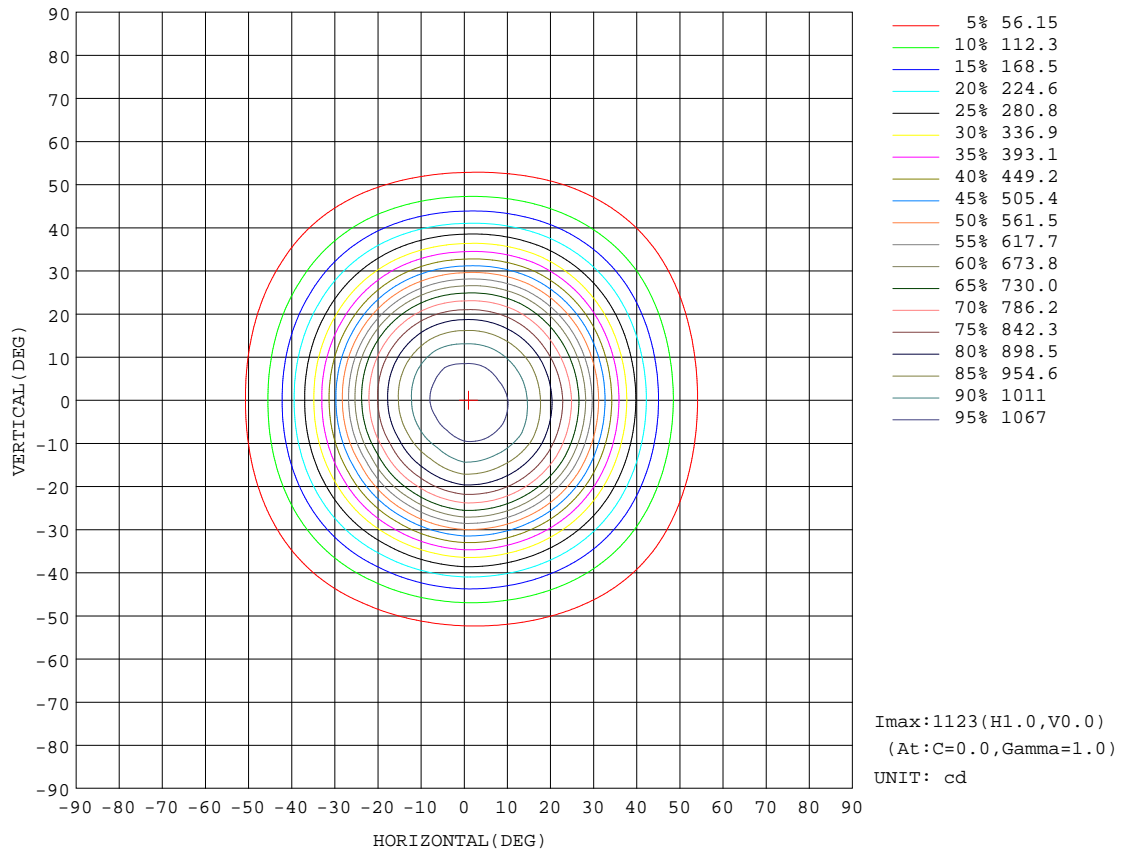
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	81	74	69	81	74	69	80	73	69	65
0.80	90	83	78	89	82	78	88	82	78	73
1.00	95	89	84	94	88	84	93	88	84	79
1.25	100	94	90	99	93	89	97	92	89	84
1.50	103	98	94	102	97	93	99	95	92	87
2.00	107	102	98	105	101	97	102	99	96	90
2.50	109	104	101	107	103	100	104	101	98	92
3.00	110	107	103	109	105	102	105	102	100	93
4.00	113	110	107	111	108	106	107	105	103	96
5.00	114	111	109	112	110	108	108	106	105	97
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:2018-10-15

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:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm		
NAME: CD10W-NW-B	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.03	PROTECTION ANGLE:

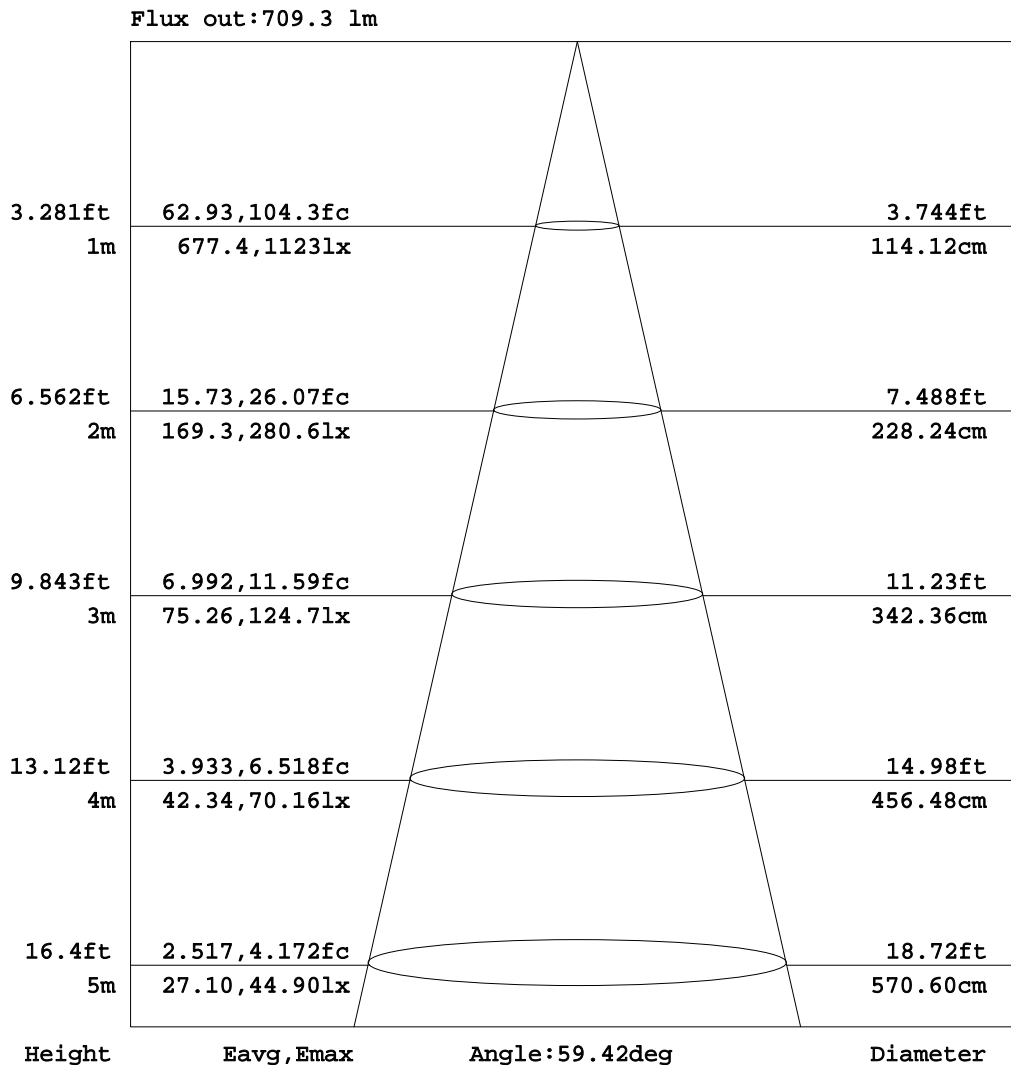


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-10-15

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:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm		
NAME: CD10W-NW-B	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.03	PROTECTION ANGLE:



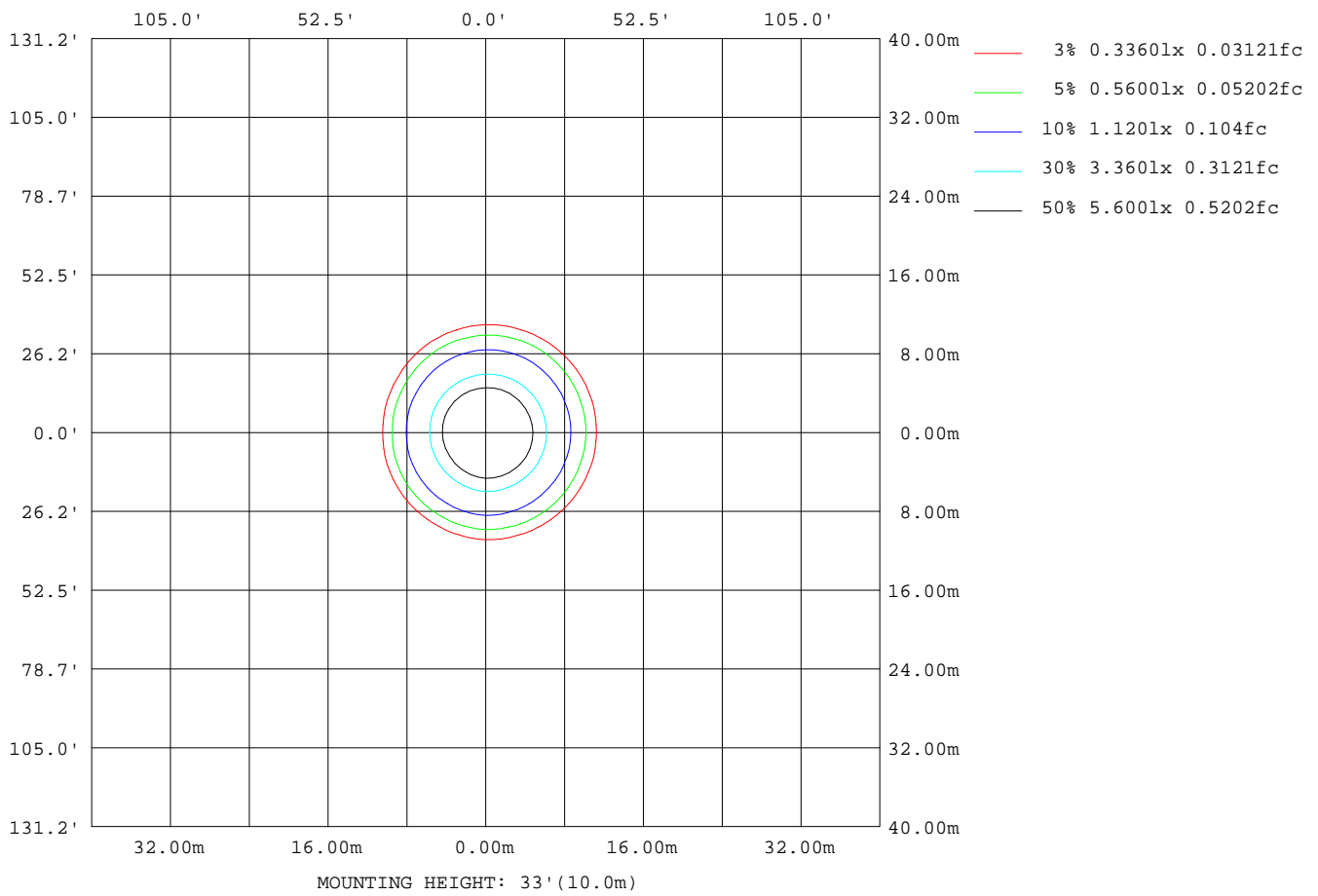
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2018-10-15

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

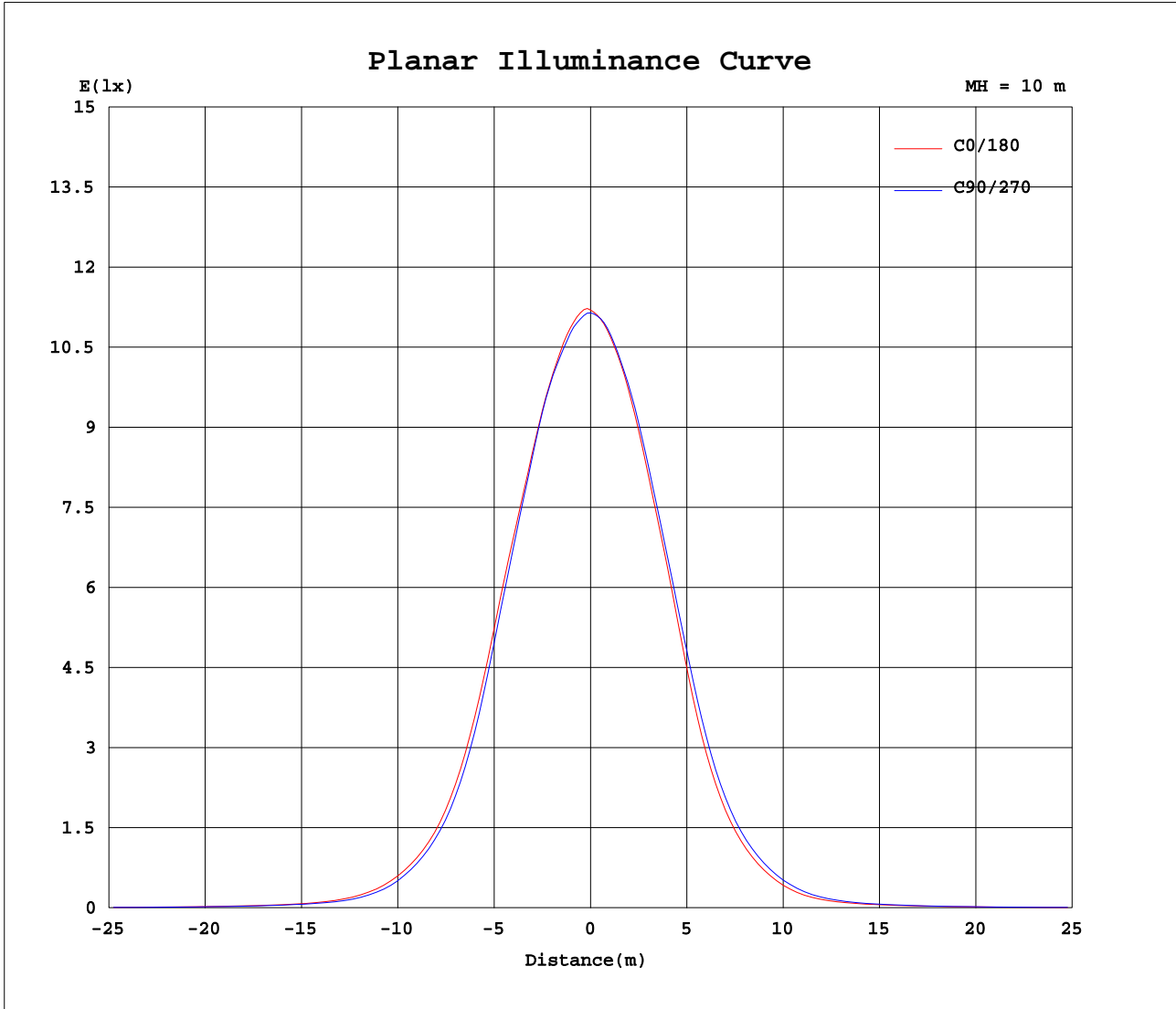
Test:U:240.3V I:0.0480A P:10.40W PF:0.9000 Lamp Flux:1130.55x1 lm		
NAME: CD10W-NW-B	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.03	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
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 Test Date:2018-10-15

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: 2018-10-15

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:

