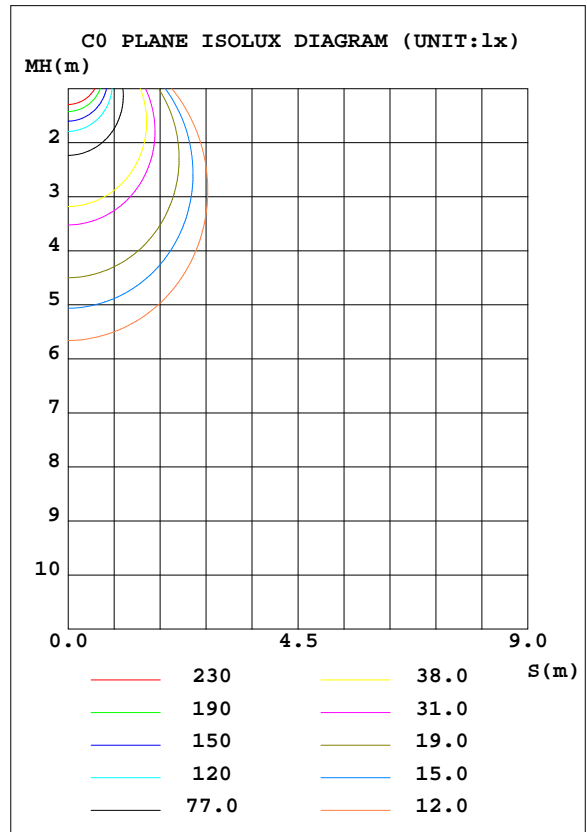
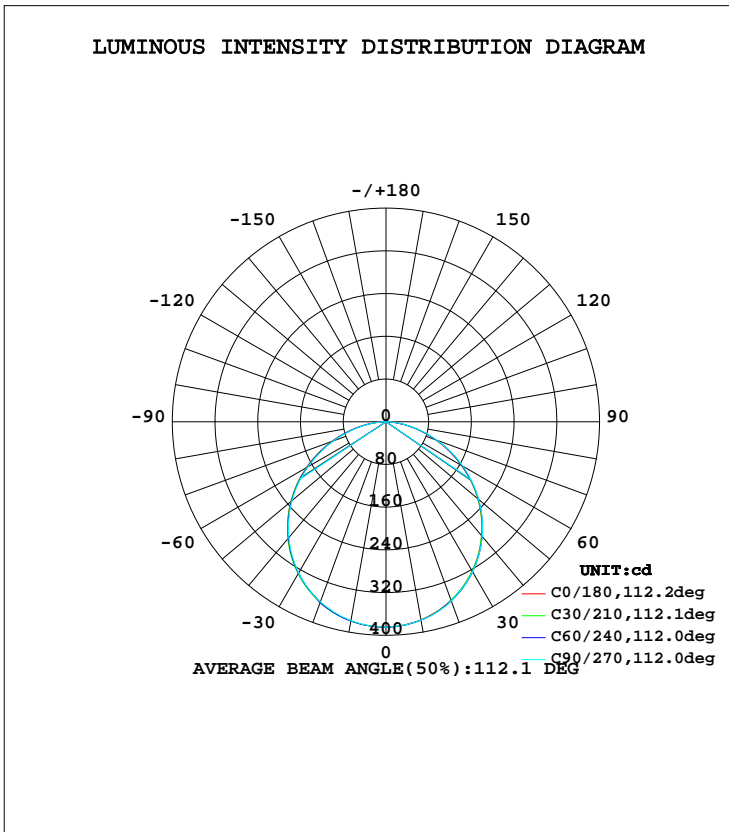


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 113.22 lm/W			
MODEL	CP10-16W-CC	I <sub>max</sub> (cd)	384.7	S/MH(C0/180)	1.25
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1094.8	η UP, DN(C0-180)	0.0, 49.6
NOMINAL FLUX(lm)	1094.84	CIE CLASS	DIRECT	η UP, DN(C180-360)	0.0, 50.4
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230.1	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:2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φlum,lamp
10	376.6	377.0	377.1	378.3	378.5	379.0	378.0	377.5	0- 10	36.38	36.38	3.32,3.32
20	356.2	356.1	357.2	358.6	360.8	360.5	358.8	357.5	10- 20	104.3	140.7	12.9,12.9
30	322.9	323.6	324.2	326.6	328.2	328.2	327.0	324.7	20- 30	158.2	298.9	27.3,27.3
40	278.6	279.2	280.4	283.2	285.4	284.9	283.2	280.7	30- 40	190.9	489.8	44.7,44.7
50	224.4	225.3	226.7	229.9	232.5	231.6	229.8	227.2	40- 50	197.6	687.4	62.8,62.8
60	163.1	164.1	166.1	169.0	172.3	170.6	168.2	166.1	50- 60	177.5	864.9	79,79
70	99.22	100.2	102.0	105.0	108.3	106.4	103.8	102.1	60- 70	134.1	999.0	91.2,91.2
80	39.40	39.54	41.22	43.63	47.16	45.01	42.88	41.44	70- 80	76.22	1075	98.2,98.2
90	0.2572	0.2604	0.2392	0.2573	0.7537	0.4340	0.3469	0.3650	80- 90	19.65	1095	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		

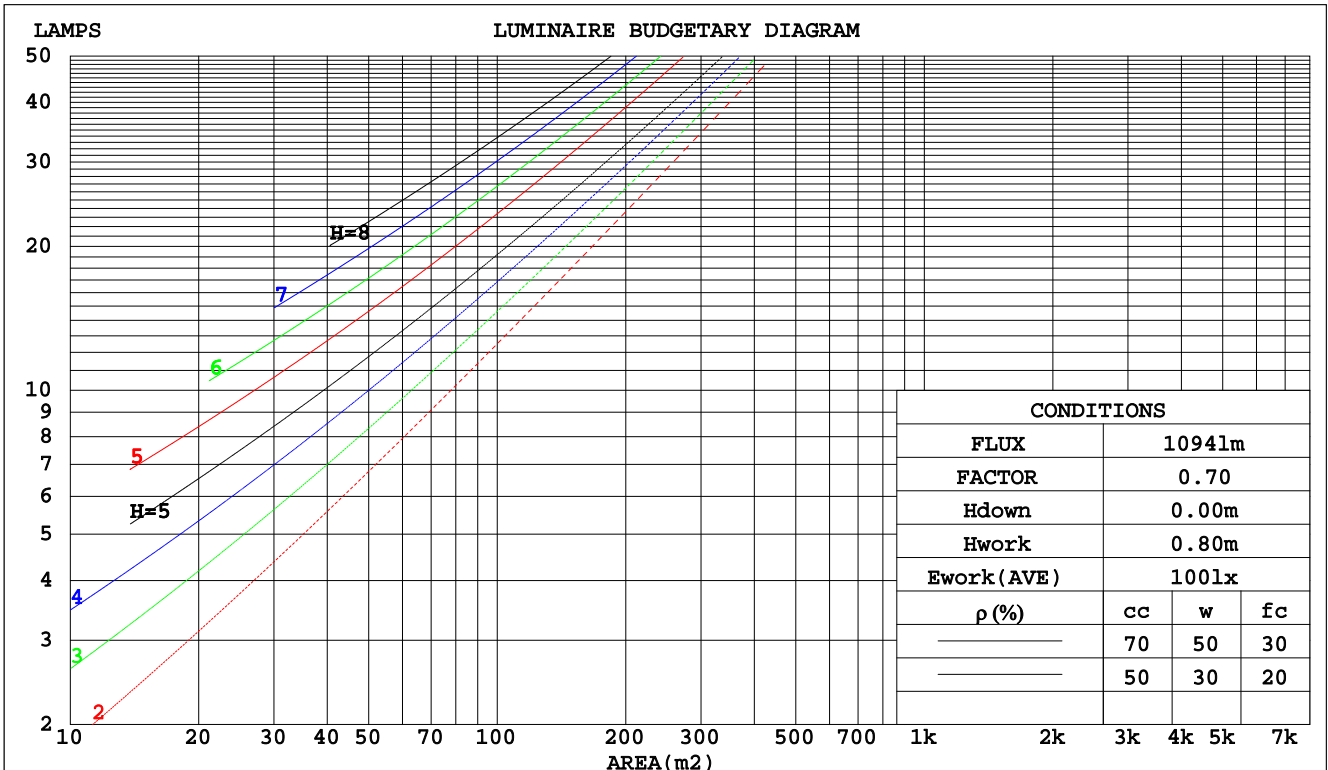
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

pcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pw																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	.00
1.0	1.04	.00	.96	1.02	.98	.94	.97	.94	.91	.93	.91	.88	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.82	.77	.85	.80	.75	.82	.77	.73	.79	.75	.72	.70
3.0	.79	.71	.65	.78	.70	.64	.75	.68	.63	.72	.67	.62	.70	.65	.61	.59
4.0	.70	.62	.55	.69	.61	.54	.66	.59	.54	.64	.58	.53	.62	.57	.52	.50
5.0	.63	.54	.47	.62	.53	.47	.60	.52	.46	.58	.51	.46	.56	.50	.45	.43
6.0	.57	.48	.41	.56	.47	.41	.54	.46	.41	.52	.45	.40	.50	.44	.40	.38
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.41	.36	.46	.40	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.45	.37	.32	.43	.37	.32	.42	.36	.32	.30
9.0	.43	.35	.29	.42	.34	.29	.41	.34	.29	.40	.33	.29	.39	.33	.29	.27
10.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.37	.31	.26	.36	.30	.26	.24



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

WEC AND CCEC

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	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	.308	.175	.056	.301	.172	.055	.288	.165	.053	.276	.159	.051	.265	.153	.049	
2.0	.291	.159	.049	.285	.157	.048	.273	.152	.047	.262	.147	.046	.252	.143	.045	
3.0	.269	.143	.043	.264	.141	.043	.254	.137	.042	.244	.134	.041	.235	.130	.040	
4.0	.249	.129	.038	.244	.128	.038	.235	.125	.037	.226	.122	.037	.218	.119	.036	
5.0	.230	.117	.034	.226	.116	.034	.218	.113	.033	.210	.111	.033	.203	.108	.033	
6.0	.213	.107	.031	.210	.106	.030	.202	.104	.030	.196	.102	.030	.189	.100	.030	
7.0	.199	.098	.028	.195	.097	.028	.189	.095	.027	.183	.094	.027	.177	.092	.027	
8.0	.186	.091	.025	.183	.090	.025	.177	.088	.025	.171	.087	.025	.166	.085	.025	
9.0	.174	.084	.023	.171	.083	.023	.166	.082	.023	.161	.081	.023	.156	.079	.023	
10.0	.164	.078	.022	.161	.078	.022	.156	.077	.022	.152	.075	.021	.148	.074	.021	

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	.180	.156	.134	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.172	.132	.098	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.114	.074	.141	.099	.064	.097	.068	.045	.056	.040	.027	.018	.013	.009	
4.0	.157	.101	.058	.135	.087	.051	.093	.061	.036	.054	.036	.021	.017	.012	.007	
5.0	.149	.091	.047	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.014	.008	.004	
9.0	.123	.065	.025	.106	.056	.022	.073	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.022	.101	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

Uncorrected UGR Table

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm										
NAME: CP10-16W-CC					TYPE:10W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:1		
MFR.:					SUR.:0.0232			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	22.1	23.6	22.4	23.8	24.1	22.2	23.7	22.4	23.9	24.1
3H	23.6	25.0	23.9	25.2	25.4	23.7	25.1	24.0	25.3	25.5
4H	24.1	25.5	24.4	25.7	26.0	24.2	25.6	24.5	25.8	26.1
6H	24.5	25.8	24.8	26.0	26.3	24.6	25.9	25.0	26.1	26.4
8H	24.6	25.8	24.9	26.1	26.4	24.7	25.9	25.1	26.2	26.5
12H	24.6	25.8	25.0	26.1	26.4	24.8	25.9	25.1	26.2	26.5
4H 2H	22.7	24.1	23.0	24.3	24.6	22.8	24.1	23.1	24.4	24.6
3H	24.3	25.5	24.7	25.8	26.1	24.4	25.6	24.8	25.9	26.2
4H	25.0	26.1	25.4	26.4	26.8	25.1	26.2	25.5	26.5	26.8
6H	25.5	26.5	25.9	26.8	27.2	25.6	26.6	26.0	26.9	27.3
8H	25.7	26.6	26.1	26.9	27.3	25.8	26.7	26.2	27.0	27.4
12H	25.7	26.6	26.2	26.9	27.3	25.9	26.7	26.3	27.0	27.5
8H 4H	25.3	26.2	25.7	26.5	26.9	25.3	26.2	25.8	26.6	27.0
6H	25.9	26.6	26.3	27.0	27.5	26.0	26.7	26.4	27.1	27.5
8H	26.1	26.8	26.6	27.2	27.6	26.2	26.9	26.7	27.3	27.7
12H	26.3	26.8	26.7	27.3	27.7	26.3	26.9	26.8	27.4	27.8
12H 4H	25.3	26.1	25.7	26.5	26.9	25.3	26.2	25.8	26.5	26.9
6H	25.9	26.6	26.4	27.0	27.5	26.0	26.7	26.5	27.1	27.6
8H	26.2	26.8	26.7	27.2	27.7	26.3	26.8	26.8	27.3	27.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 1095 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.3)

C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

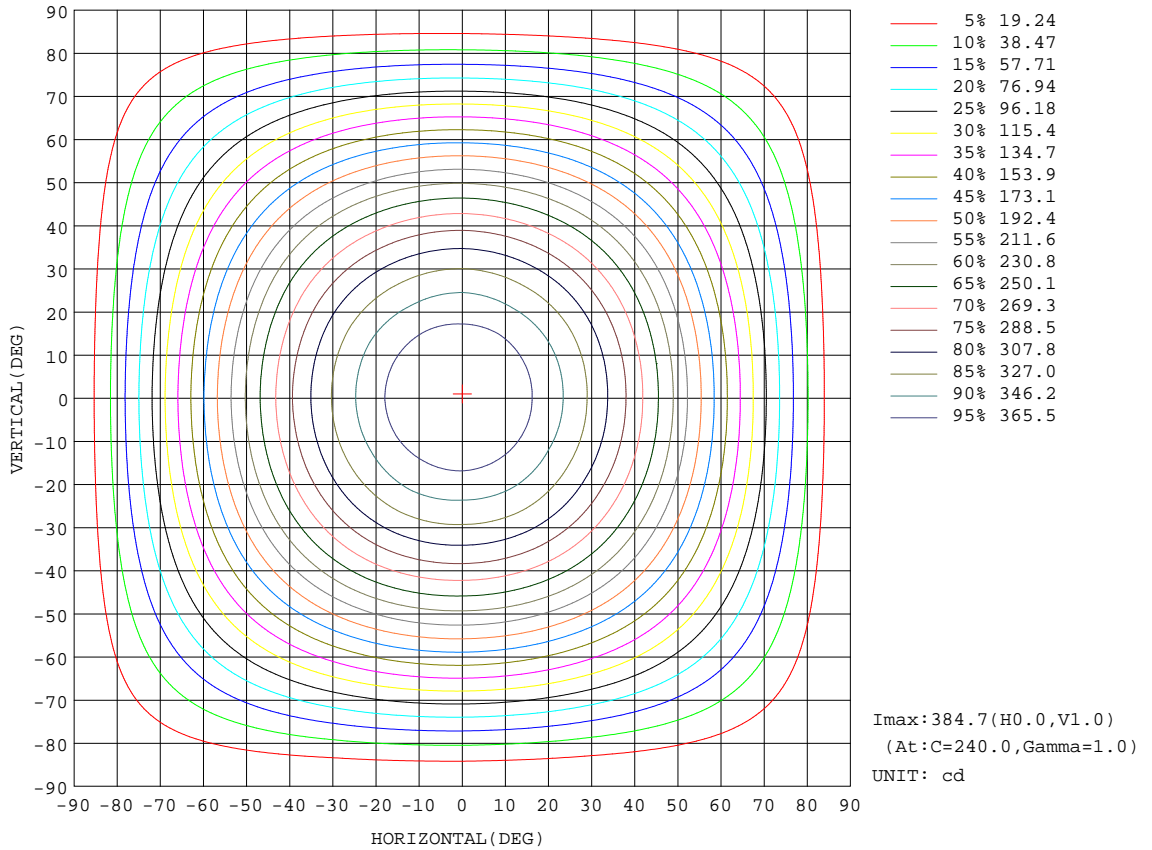
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	56	48	65	55	48	41
1.00	76	65	58	75	64	57	73	66	57	50
1.25	83	73	66	82	72	65	79	71	64	57
1.50	88	78	71	86	77	71	83	76	70	62
2.00	95	87	80	93	85	79	90	83	78	70
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	87	78
4.00	106	101	96	104	99	95	100	95	92	83
5.00	109	104	100	106	102	98	102	98	95	86
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:2019-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:

ISOCANDELA DIAGRAM

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

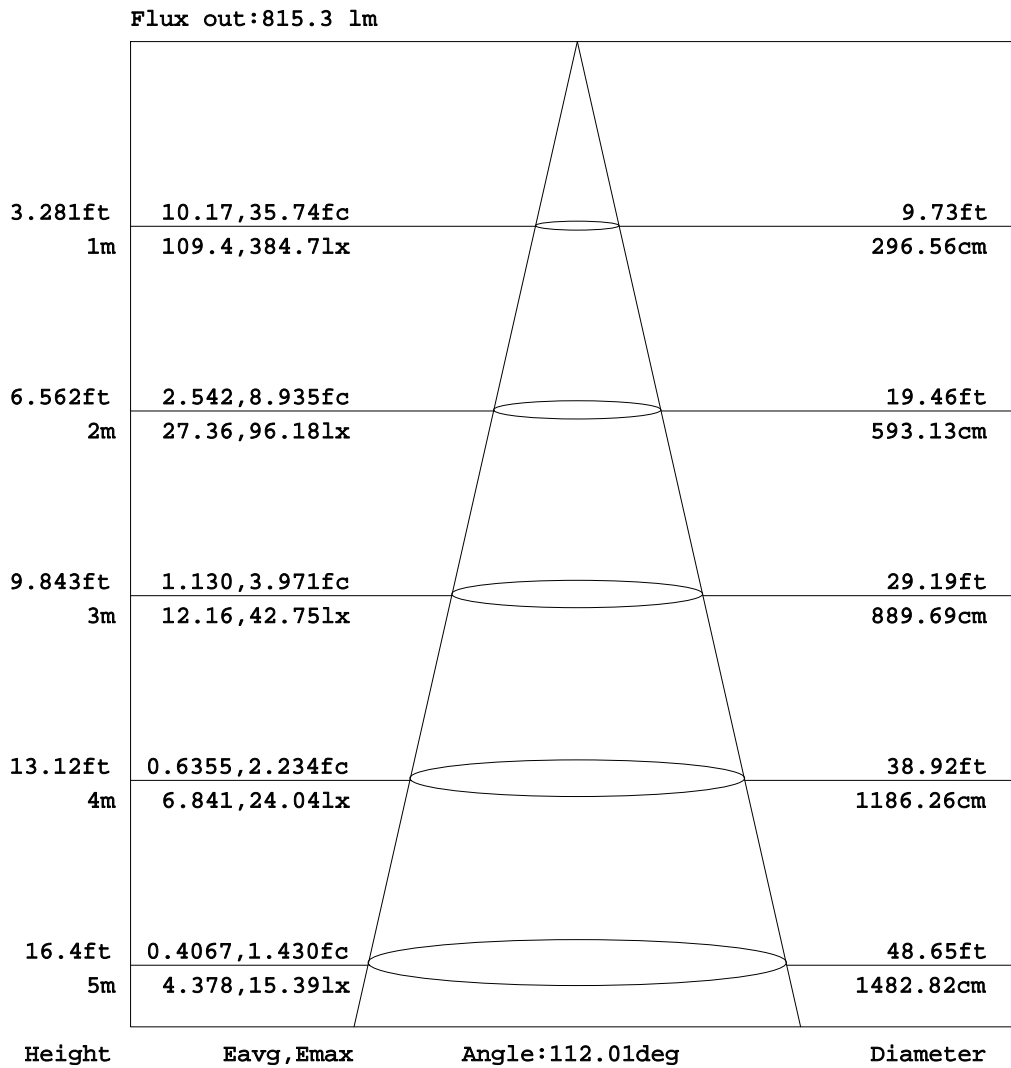


C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature: 25.3DEG  
 Operators: DAMIN  
 Test Date: 2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: 65.0%  
 Test Distance: 9.443m [K=1.0000]  
 Remarks:

AAI Figure

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:



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

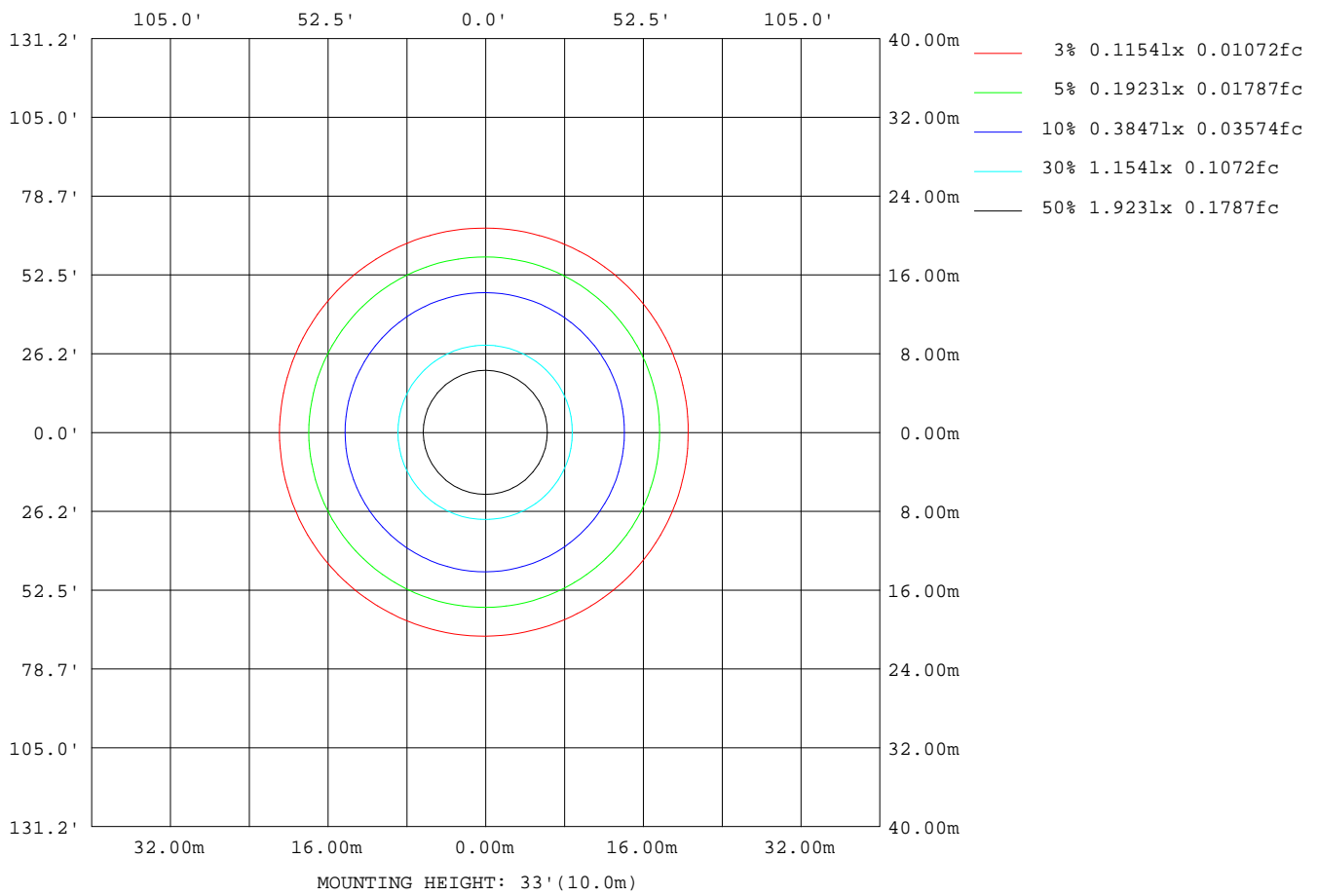
C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [K=1.0000]  
 Remarks:



**ISOLUX DIAGRAM**

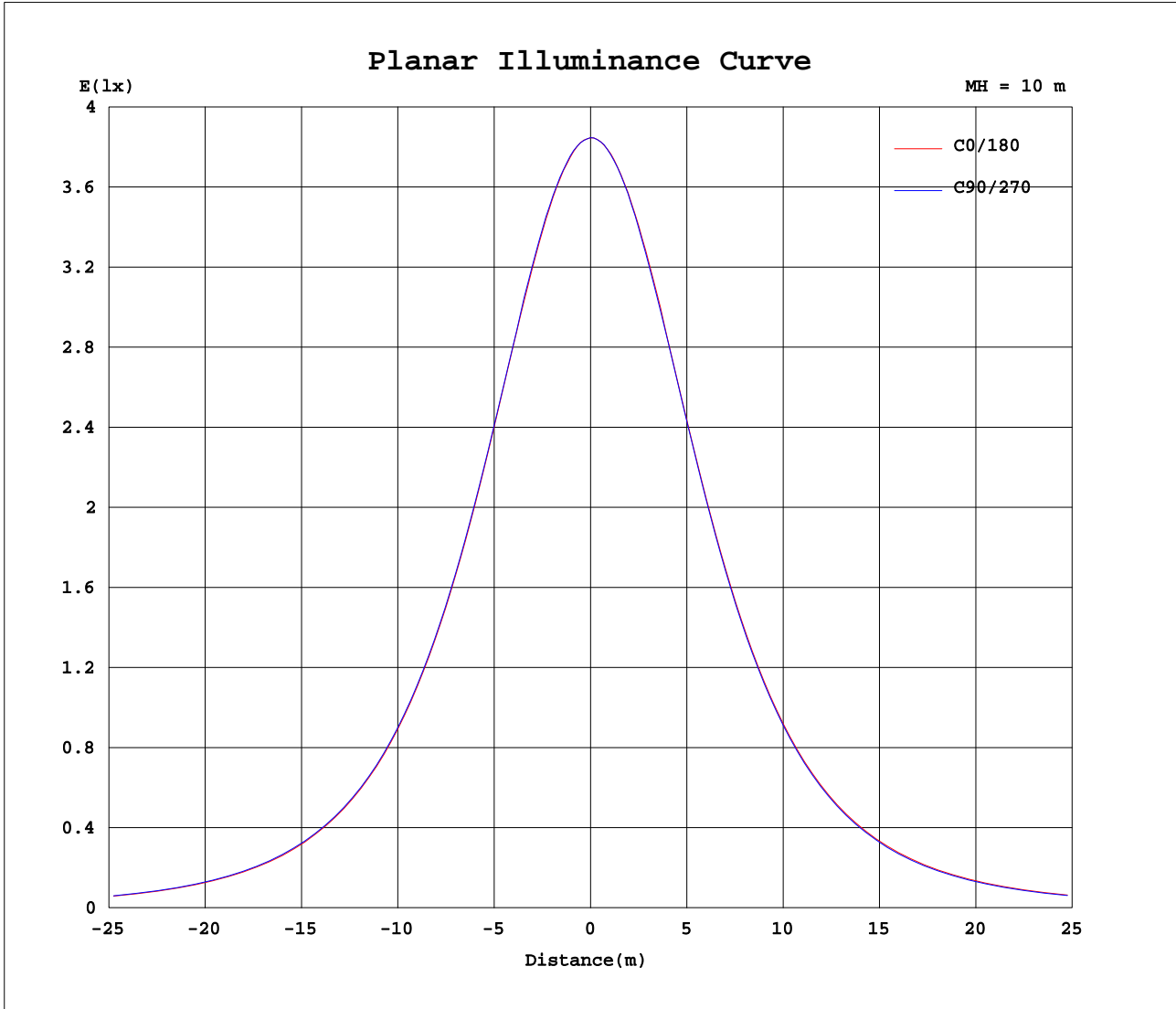
Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:



C Range: 0 - 360DEG  
 C Interval: 30.0DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:DAMIN  
 Test Date:2019-06-22

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity:65.0%  
 Test Distance:9.443m [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: 2019-06-22

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.276  
 Humidity: 65.0%  
 Test Distance: 9.443m [K=1.0000]  
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.1V I:0.0450A P:9.670W PF:0.9250 Lamp Flux:1094.84x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

Table--1

UNIT: cd

C(DEG)\ γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330						
0	385	385	385	385	385	385	385	385	385	385	385	385						
5	382	383	383	382	383	383	383	383	383	383	383	382						
10	377	377	377	377	378	379	379	379	379	378	378	377						
15	368	368	369	369	370	371	371	371	371	370	370	369						
20	356	355	357	357	358	359	361	360	361	359	358	357						
25	341	341	342	342	344	344	345	346	345	344	342	342						
30	323	323	324	324	326	327	328	329	327	327	325	325						
35	302	302	304	304	306	307	308	309	307	306	304	304						
40	279	278	280	280	283	284	285	286	284	283	281	280						
45	253	253	254	255	257	258	260	260	258	258	256	254						
50	224	225	226	227	229	231	232	232	231	230	228	227						
55	195	195	196	197	199	201	203	203	201	200	198	197						
60	163	164	164	166	168	170	172	171	170	168	167	165						
65	131	132	132	134	136	139	141	139	138	136	135	133						
70	99.2	100	100	102	103	106	108	107	106	104	103	101						
75	68.2	68.8	68.9	70.6	72.1	74.9	76.7	75.3	74.1	72.3	71.6	69.9						
80	39.4	39.7	39.4	41.2	42.1	45.1	47.2	45.7	44.3	42.9	42.0	40.8						
85	14.4	14.2	13.8	15.6	15.7	18.1	20.9	19.5	18.2	17.3	15.8	15.1						
90	0.26	0.27	0.25	0.24	0.25	0.27	0.75	0.53	0.34	0.35	0.36	0.37						

C Range: 0 - 360DEG	γ Range: 0 - 90DEG
C Interval: 30.0DEG	γ Interval: 1.0DEG
Test Speed: HIGH	Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
Temperature:25.3DEG	Humidity:65.0%
Operators:DAMIN	Test Distance:9.443m [K=1.0000]
Test Date:2019-06-22	Remarks: