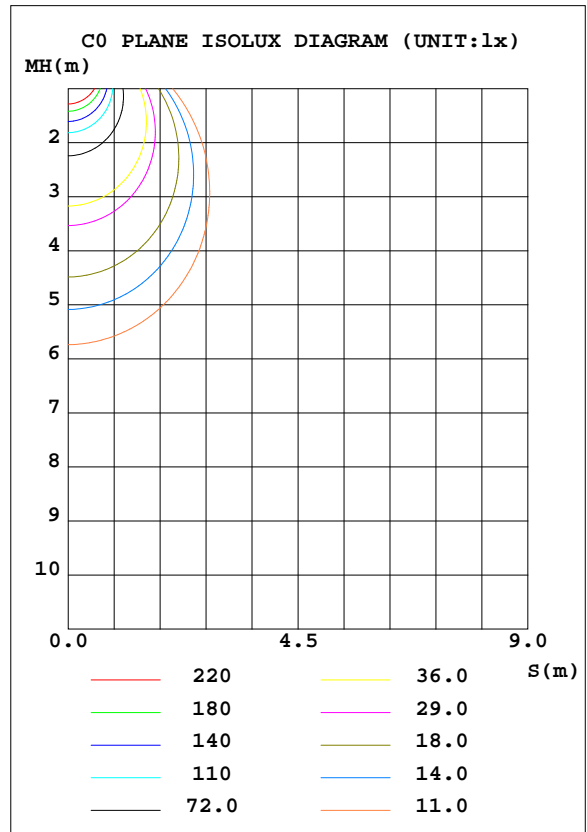
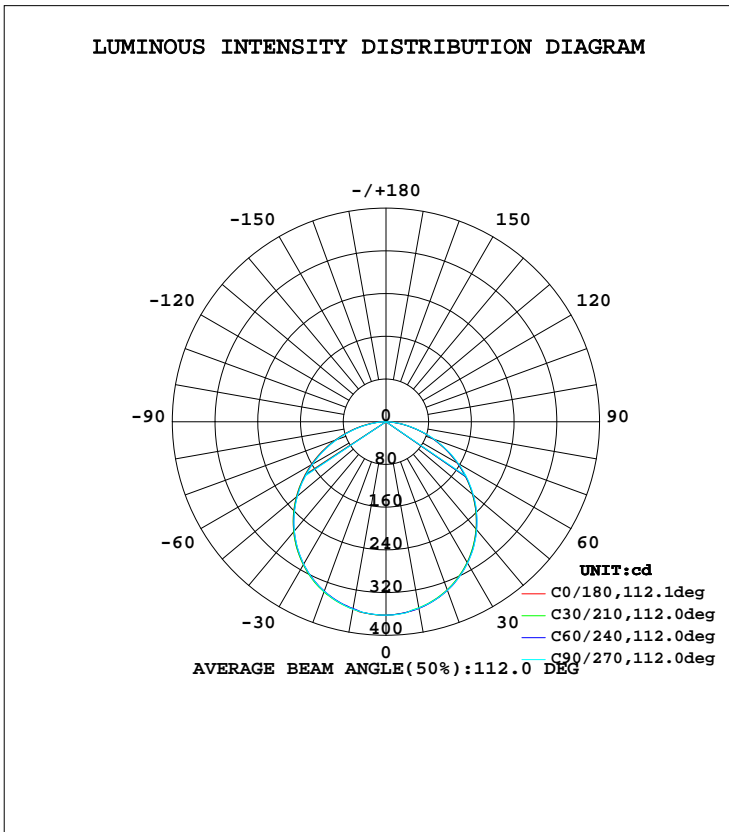


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.1V I:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.71 lm/W			
MODEL	CP10-16W-CC	I _{max} (cd)	362.2	S/MH(C0/180)	1.25
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)	1.26
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	1030.9	η UP, DN(C0-180)	0.0, 49.6
NOMINAL FLUX(lm)	1030.92	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	Φ lum,lamp
10	354.8	354.4	354.3	355.6	355.6	355.8	356.3	354.9	0- 10	34.24	34.24	3.32,3.32
20	335.4	335.6	335.9	337.6	338.4	338.4	338.2	336.3	10- 20	98.11	132.3	12.8,12.8
30	304.5	304.6	305.5	307.7	309.2	308.8	308.0	305.9	20- 30	149.0	281.4	27.3,27.3
40	262.6	263.0	264.4	266.8	268.8	268.1	267.0	264.5	30- 40	179.8	461.1	44.7,44.7
50	211.7	212.1	213.9	216.5	219.1	218.0	216.4	214.1	40- 50	186.2	647.3	62.8,62.8
60	153.7	154.6	156.7	159.2	162.4	160.6	158.5	156.5	50- 60	167.1	814.4	79,79
70	93.54	94.28	96.12	98.80	102.0	100.0	97.78	96.19	60- 70	126.3	940.7	91.2,91.2
80	37.11	37.20	38.85	41.00	44.33	42.31	40.35	39.00	70- 80	71.76	1012	98.2,98.2
90	0.2154	0.1914	0.1855	0.1975	0.6463	0.3709	0.2873	0.3022	80- 90	18.47	1031	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		

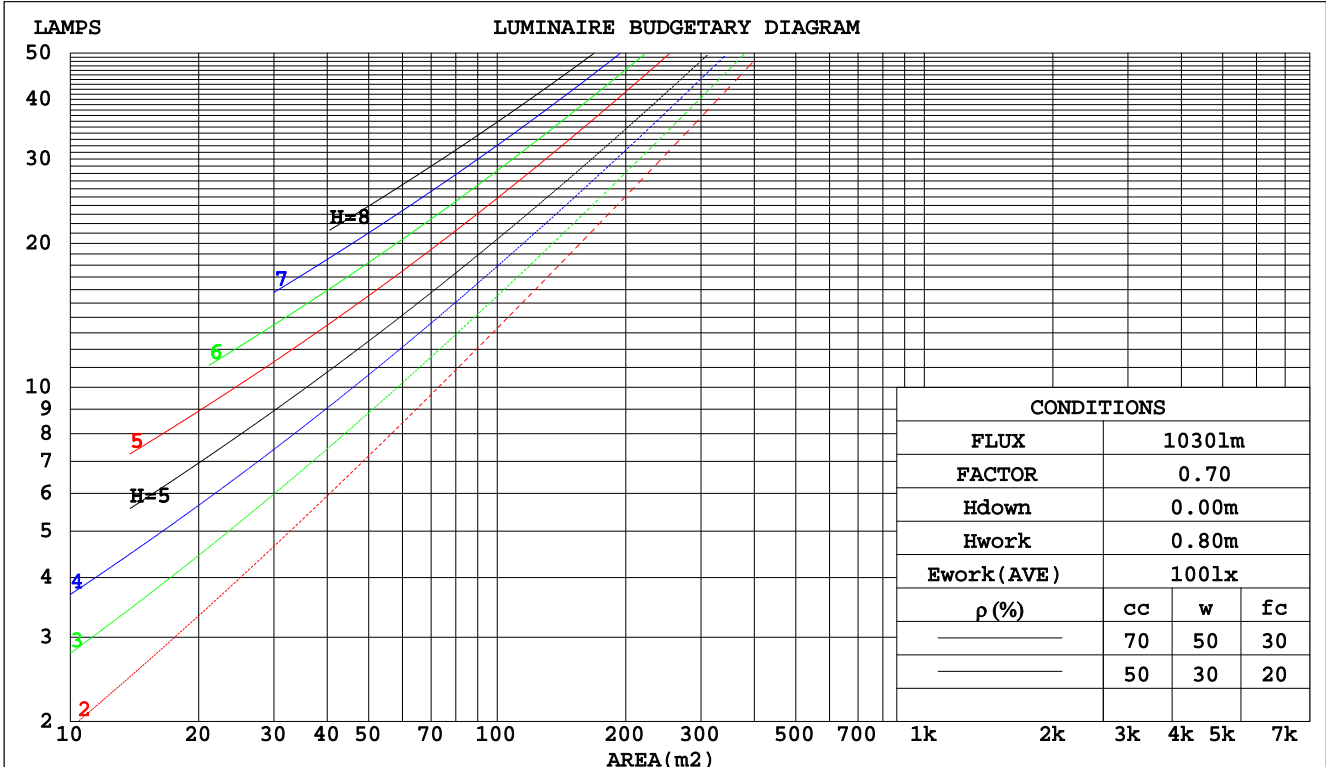
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-22

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:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	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																
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	1.04	.90	.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:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	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:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm										
NAME: CP10-16W-CC					TYPE:10W			WEIGHT:		
DIM.:					SPEC.:3000K			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	21.9	23.4	22.2	23.6	23.8	22.0	23.5	22.2	23.7	23.9
3H	23.4	24.8	23.7	25.0	25.2	23.4	24.9	23.7	25.1	25.3
4H	23.9	25.3	24.2	25.5	25.8	24.0	25.4	24.3	25.6	25.9
6H	24.3	25.6	24.6	25.8	26.1	24.4	25.7	24.7	25.9	26.2
8H	24.4	25.6	24.7	25.9	26.2	24.5	25.7	24.9	26.0	26.3
12H	24.4	25.6	24.8	25.9	26.2	24.6	25.7	24.9	26.0	26.3
4H 2H	22.5	23.9	22.8	24.1	24.4	22.6	23.9	22.9	24.1	24.4
3H	24.1	25.3	24.5	25.6	25.9	24.2	25.4	24.6	25.7	26.0
4H	24.8	25.9	25.2	26.2	26.5	24.9	26.0	25.3	26.3	26.6
6H	25.3	26.3	25.7	26.6	27.0	25.4	26.4	25.8	26.7	27.1
8H	25.5	26.3	25.9	26.7	27.1	25.6	26.4	26.0	26.8	27.2
12H	25.5	26.4	26.0	26.7	27.1	25.6	26.5	26.1	26.8	27.2
8H 4H	25.1	26.0	25.5	26.3	26.7	25.1	26.0	25.5	26.4	26.8
6H	25.7	26.4	26.1	26.8	27.3	25.8	26.5	26.2	26.9	27.3
8H	25.9	26.6	26.4	27.0	27.4	26.0	26.6	26.5	27.1	27.5
12H	26.1	26.6	26.5	27.1	27.5	26.1	26.7	26.6	27.1	27.6
12H 4H	25.1	25.9	25.5	26.3	26.7	25.1	26.0	25.6	26.3	26.7
6H	25.7	26.4	26.2	26.8	27.3	25.8	26.5	26.3	26.9	27.3
8H	26.0	26.6	26.5	27.0	27.5	26.1	26.6	26.5	27.1	27.6
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 1031 lm Total Lamp Luminous Flux.(8log(F/F0) = 0.1)

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:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

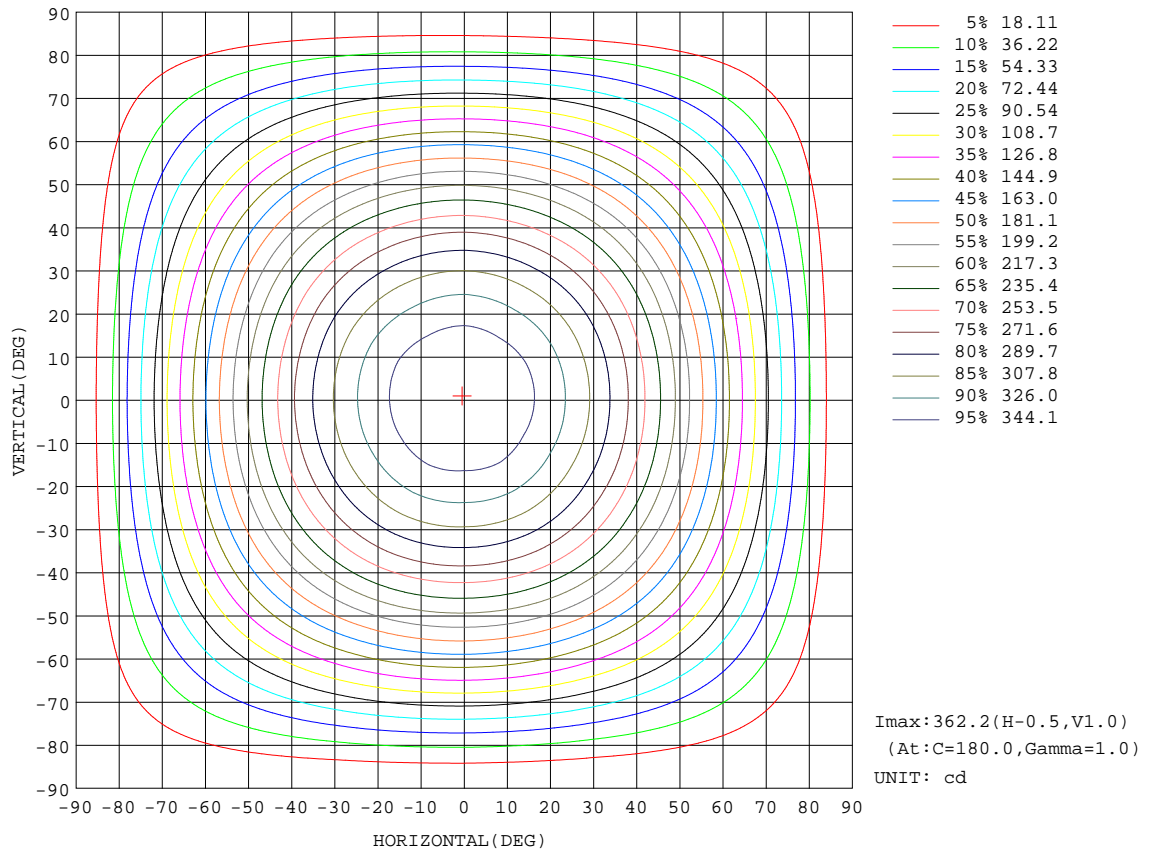
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	58	46	39	57	46	39	56	45	39	32
0.80	68	56	49	67	56	48	65	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

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:

ISOCANDELA DIAGRAM

Test:U:230.1V I:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:

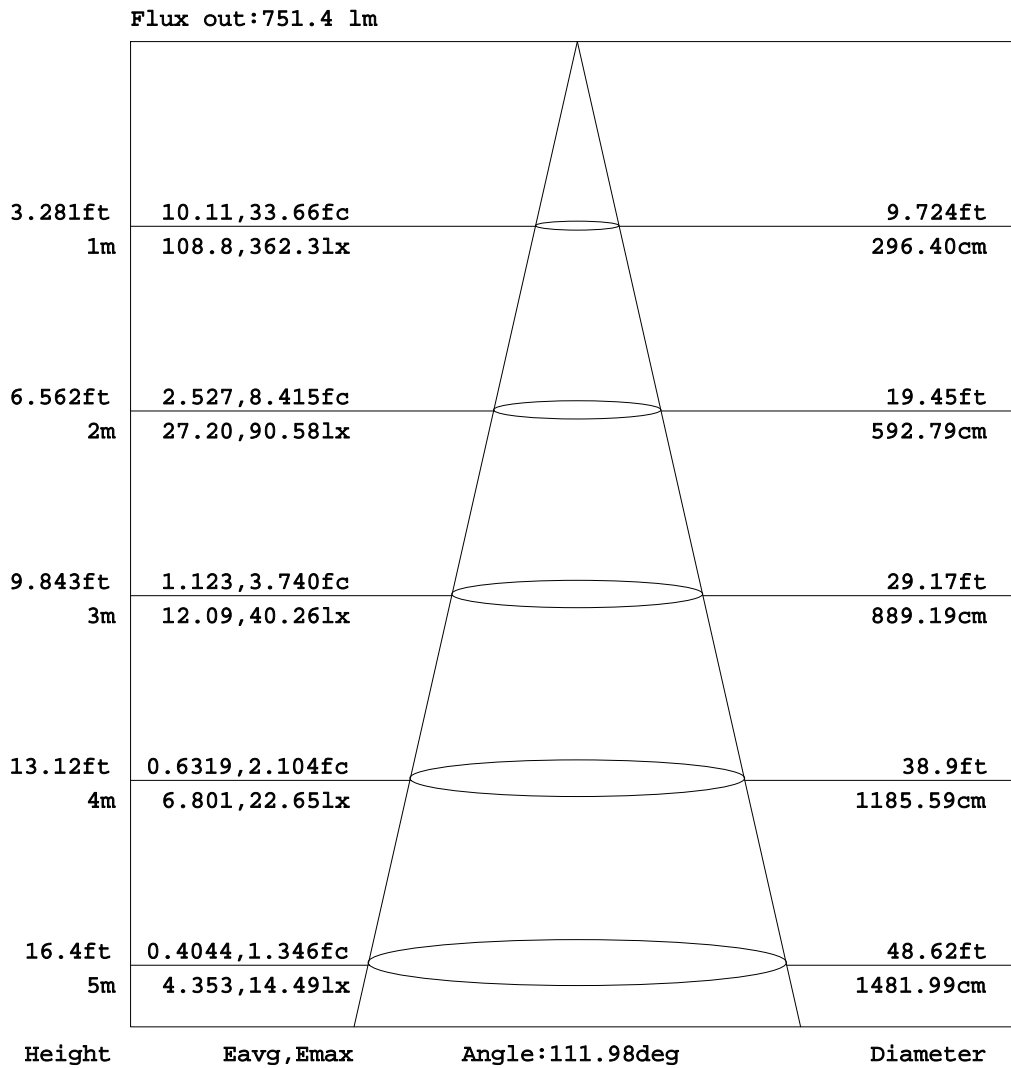


C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-06-22

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:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:



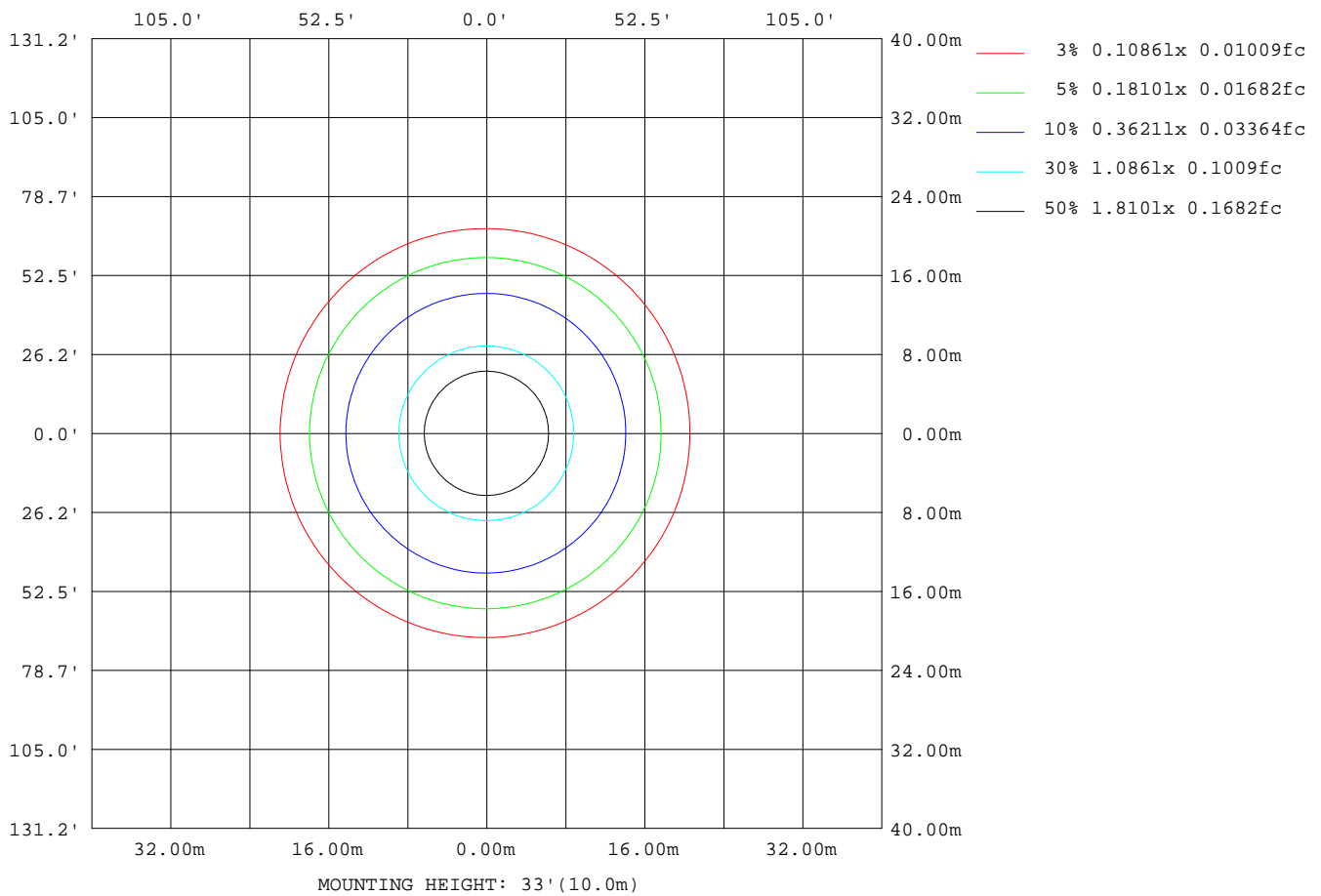
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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

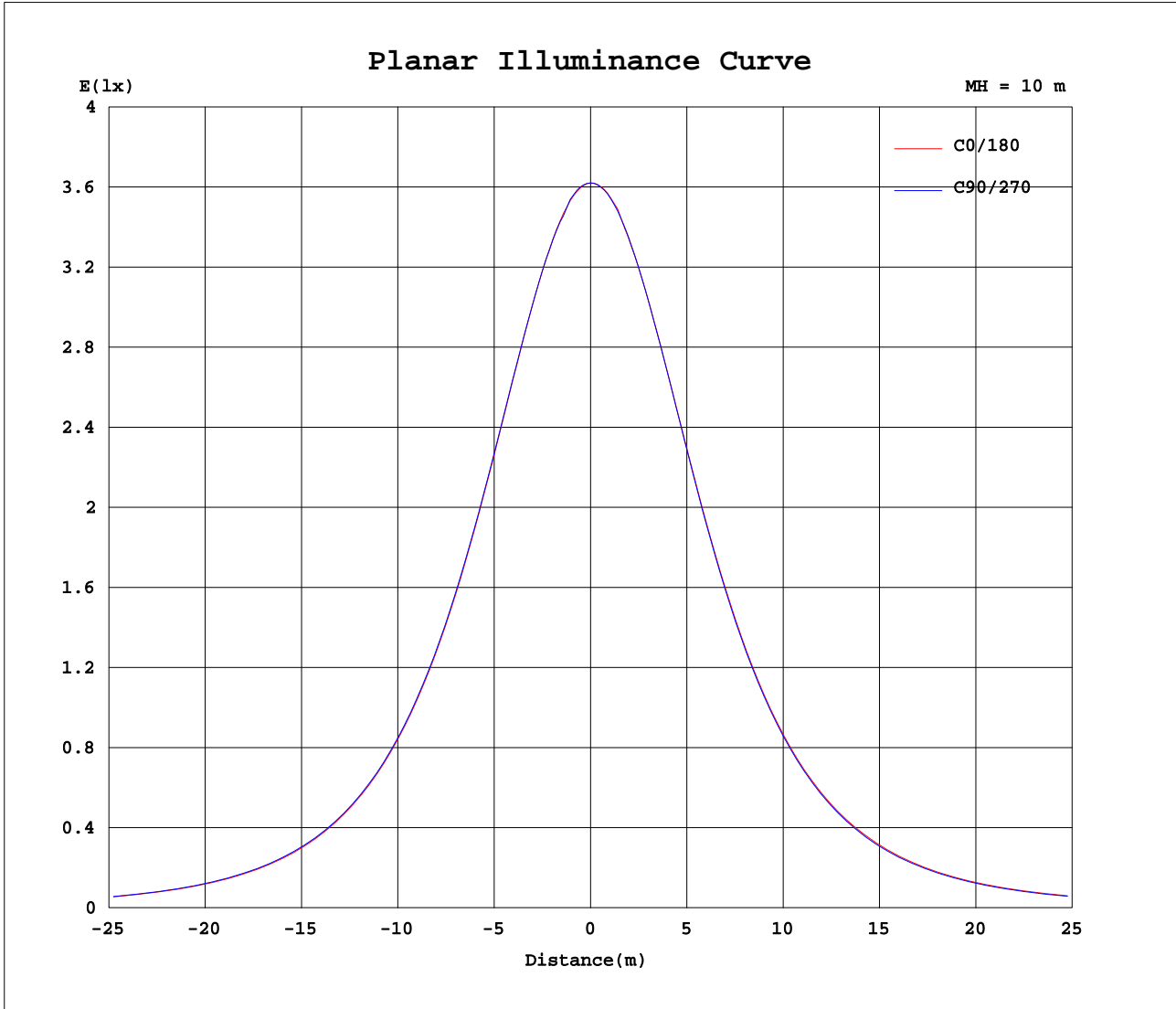
Test:U:230.1V I:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	SERIAL No.:1
MFR.:	SUR.:0.0232	PROTECTION ANGLE:



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

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:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.1V I:0.0460A P:9.940W PF:0.9280 Lamp Flux:1030.92x1 lm		
NAME: CP10-16W-CC	TYPE:10W	WEIGHT:
DIM.:	SPEC.:3000K	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	362	362	362	362	362	362	362	362	362	362	362	362						
5	360	360	360	360	361	361	361	361	361	361	361	361						
10	355	354	355	354	356	355	356	356	355	356	355	355						
15	347	346	347	347	348	348	349	350	348	349	347	347						
20	335	335	336	336	338	337	338	339	338	338	336	336						
25	321	321	322	322	324	324	325	326	324	325	323	322						
30	305	304	305	306	307	308	309	310	308	308	306	306						
35	285	285	286	286	288	289	290	291	289	289	287	286						
40	263	262	264	264	266	267	269	269	267	267	265	264						
45	238	238	239	240	242	243	245	245	243	243	241	240						
50	212	212	213	214	216	217	219	219	217	216	215	213						
55	183	184	184	186	187	190	191	190	189	188	187	185						
60	154	154	155	157	158	160	162	161	160	159	157	155						
65	124	124	125	126	128	130	132	131	130	128	127	125						
70	93.5	94.2	94.3	96.1	97.5	100	102	101	99.5	97.8	97.1	95.3						
75	64.3	64.8	64.8	66.5	67.9	70.4	72.3	70.8	69.7	68.0	67.5	65.8						
80	37.1	37.4	37.0	38.8	39.6	42.4	44.3	42.9	41.7	40.4	39.6	38.4						
85	13.5	13.4	12.9	14.6	14.7	17.0	19.6	18.3	17.1	16.3	14.9	14.2						
90	0.22	0.19	0.19	0.19	0.19	0.21	0.65	0.45	0.29	0.29	0.30	0.31						

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: