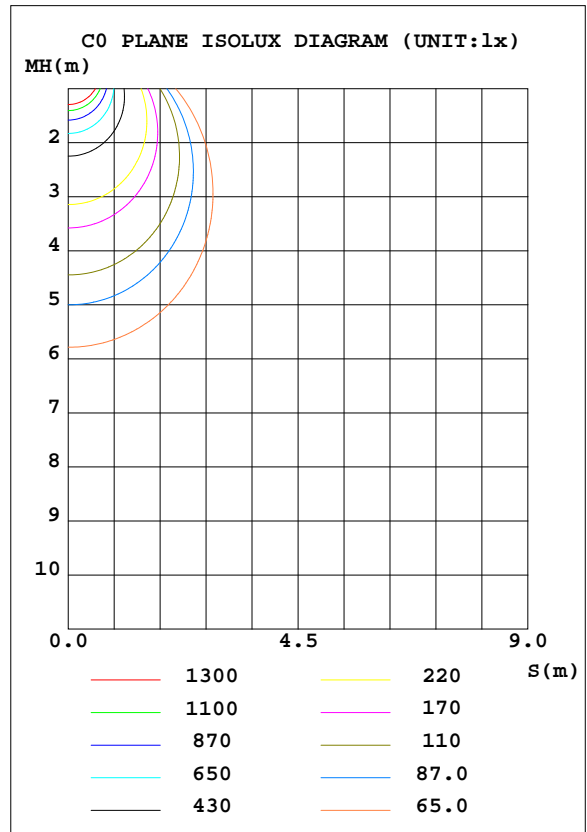
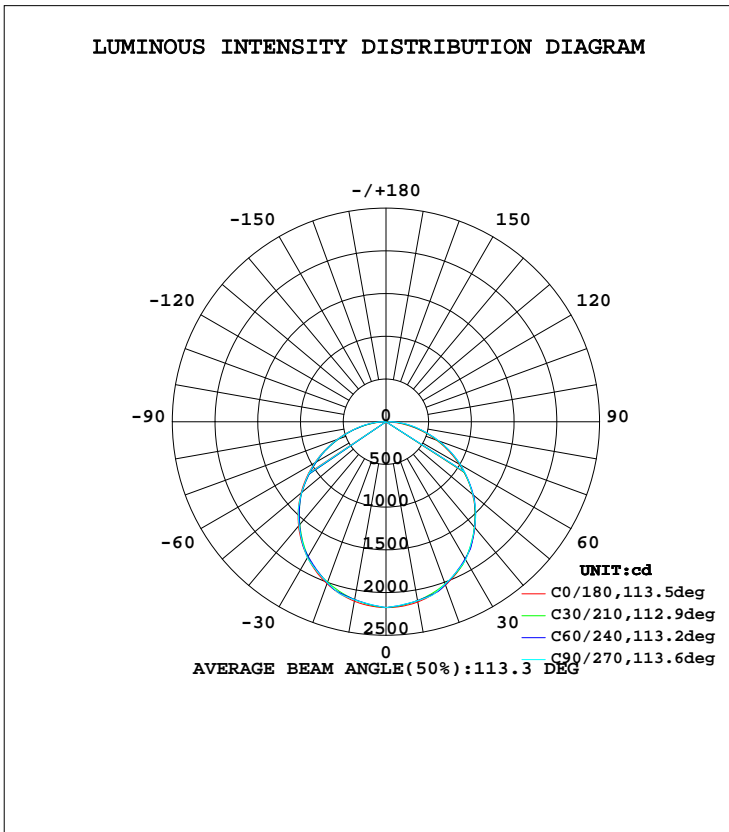


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm		
NAME: 3600414 - 60120 LED panel Colortech	TYPE:60W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:
MFR.:	SUR.:1.14X0.545	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 116.13 lm/W			
MODEL	3600414	I _{max} (cd)	2175	S/MH(C0/180)	1.27
NOMINAL POWER(W)	60	LOR(%)	100.0	S/MH(C90/270)	1.27
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	6340.6	η UP, DN(C0-180)	0.0, 50.7
NOMINAL FLUX(lm)	6340.55	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)	240.0	η down(%)	100.0	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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	lum, lamp
5	2168	2154	2151	2152	2163	2148	2146	2151	0- 5	51.67	51.67	0.81,0.81
10	2142	2125	2127	2120	2133	2112	2117	2118	5- 10	152.9	204.5	3.23,3.23
15	2097	2085	2103	2079	2084	2066	2088	2077	10- 15	249.3	453.9	7.16,7.16
20	2035	2037	2024	2030	2018	2012	2005	2028	15- 20	337.9	791.8	12.5,12.5
25	1955	1948	1944	1940	1934	1919	1923	1938	20- 25	414.3	1206	19,19
30	1857	1847	1865	1838	1834	1813	1840	1835	25- 30	477.5	1684	26.6,26.6
35	1745	1740	1740	1731	1720	1703	1711	1727	30- 35	525.4	2209	34.8,34.8
40	1618	1624	1614	1616	1592	1583	1582	1609	35- 40	554.7	2764	43.6,43.6
45	1477	1476	1488	1465	1451	1430	1453	1457	40- 45	566.2	3330	52.5,52.5
50	1323	1326	1328	1315	1298	1276	1289	1304	45- 50	559.6	3889	61.3,61.3
55	1160	1175	1168	1164	1134	1121	1125	1151	50- 55	533.3	4423	69.8,69.8
60	987.9	999.0	1007	988.9	963.3	941.7	960.1	970.5	55- 60	490.3	4913	77.5,77.5
65	809.9	826.3	832.1	816.9	786.6	766.1	782.9	793.9	60- 65	432.2	5345	84.3,84.3
70	629.8	653.3	656.9	644.8	609.2	592.1	605.7	617.7	65- 70	361.1	5706	90,90
75	453.4	479.4	481.8	471.8	435.8	419.6	428.4	442.0	70- 75	280.6	5987	94.4,94.4
80	282.4	313.1	331.7	306.7	269.5	257.3	287.1	275.1	75- 80	196.2	6183	97.5,97.5
85	110.6	168.8	181.6	163.6	90.74	130.2	145.7	139.0	80- 85	115.8	6299	99.3,99.3
90	5.690	26.15	31.45	22.05	7.246	4.775	4.314	4.446	85- 90	41.52	6341	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd								UNIT:lm			

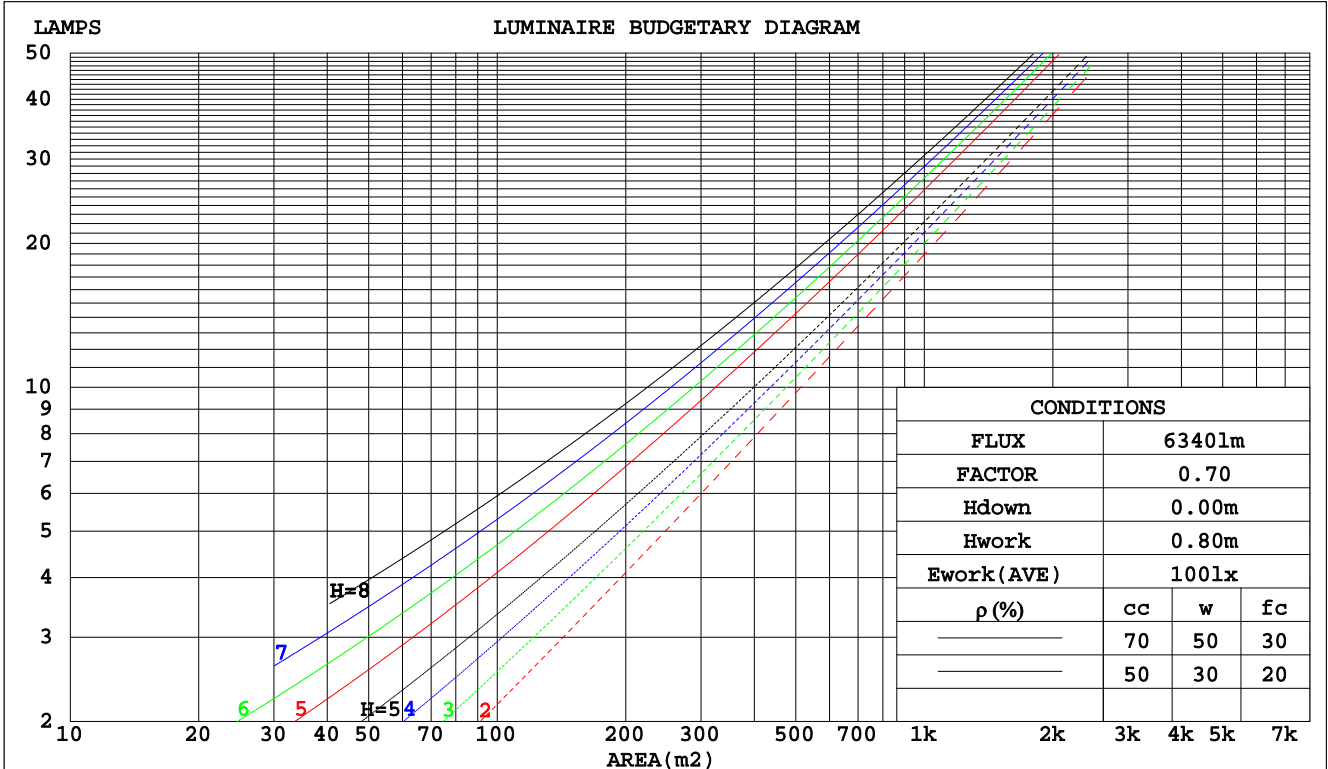
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm		
NAME: 3600414 - 60120 LED panel Colortech	TYPE:60W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:
MFR.:	SUR.:1.14X0.545	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	1.03	.99	.95	1.01	.97	.93	.97	.93	.90	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.83	.77	.88	.81	.76	.84	.79	.74	.81	.76	.72	.78	.74	.71	.69
3.0	.79	.70	.64	.77	.69	.63	.74	.67	.62	.71	.66	.61	.69	.64	.60	.58
4.0	.70	.61	.54	.68	.60	.53	.66	.58	.53	.63	.57	.52	.61	.56	.51	.49
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.45	.57	.50	.45	.55	.49	.44	.42
6.0	.56	.47	.40	.55	.46	.40	.53	.45	.40	.51	.45	.39	.50	.44	.39	.37
7.0	.51	.42	.35	.50	.41	.35	.48	.41	.35	.47	.40	.35	.45	.39	.35	.33
8.0	.46	.38	.32	.45	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.29
9.0	.42	.34	.28	.42	.34	.28	.41	.33	.28	.39	.33	.28	.38	.32	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.30	.26	.37	.30	.25	.36	.30	.25	.24



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm		
NAME: 3600414 - 60120 LED panel Colortech	TYPE:60W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:
MFR.:	SUR.:1.14X0.545	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	.319	.182	.058	.312	.178	.057	.299	.171	.055	.287	.165	.053	.275	.160	.051	
2.0	.298	.163	.050	.292	.161	.049	.280	.156	.048	.269	.151	.047	.259	.146	.046	
3.0	.274	.146	.044	.269	.144	.043	.258	.140	.043	.249	.136	.042	.240	.133	.041	
4.0	.252	.131	.039	.248	.130	.038	.238	.126	.038	.230	.123	.037	.222	.120	.037	
5.0	.233	.119	.034	.229	.117	.034	.220	.115	.034	.213	.112	.033	.206	.110	.033	
6.0	.216	.108	.031	.212	.107	.031	.204	.105	.030	.198	.103	.030	.191	.101	.030	
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.184	.095	.028	.179	.093	.027	
8.0	.187	.091	.026	.184	.091	.026	.178	.089	.025	.173	.087	.025	.168	.086	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.158	.080	.023	
10.0	.165	.079	.022	.162	.078	.022	.157	.077	.022	.153	.076	.022	.149	.075	.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	.181	.156	.134	.155	.134	.115	.106	.092	.080	.061	.053	.046	.020	.017	.015	
2.0	.173	.132	.097	.148	.114	.084	.102	.079	.059	.059	.046	.034	.019	.015	.011	
3.0	.165	.114	.074	.142	.099	.064	.097	.069	.045	.056	.040	.026	.018	.013	.009	
4.0	.158	.101	.058	.135	.087	.050	.093	.061	.035	.054	.036	.021	.017	.012	.007	
5.0	.150	.091	.047	.129	.078	.041	.089	.055	.029	.051	.032	.017	.017	.011	.006	
6.0	.143	.082	.039	.123	.071	.034	.085	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.136	.075	.033	.117	.065	.029	.081	.046	.020	.047	.027	.012	.015	.009	.004	
8.0	.129	.070	.029	.111	.060	.025	.077	.042	.018	.045	.025	.011	.015	.008	.003	
9.0	.123	.065	.025	.106	.056	.022	.074	.039	.016	.043	.023	.009	.014	.008	.003	
10.0	.118	.060	.022	.101	.052	.019	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm										
NAME: 3600414 - 60120 LED panel Colortech					TYPE:60W			WEIGHT:		
DIM.:					SPEC.:4000K			SERIAL No.:		
MFR.:					SUR.:1.14X0.545			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	17.0	18.6	17.3	18.8	19.0	17.1	18.6	17.4	18.8	19.1
3H	18.6	20.0	18.9	20.3	20.5	18.8	20.2	19.1	20.4	20.7
4H	19.2	20.6	19.6	20.8	21.1	19.5	20.8	19.8	21.1	21.3
6H	19.7	21.0	20.0	21.2	21.5	20.1	21.3	20.4	21.6	21.9
8H	19.8	21.0	20.1	21.3	21.6	20.3	21.5	20.7	21.8	22.1
12H	19.9	21.0	20.2	21.3	21.6	20.5	21.7	20.9	22.0	22.3
4H 2H	17.7	19.0	18.0	19.3	19.5	17.7	19.1	18.1	19.4	19.6
3H	19.5	20.6	19.8	20.9	21.2	19.6	20.8	19.9	21.1	21.4
4H	20.2	21.3	20.6	21.6	22.0	20.4	21.5	20.8	21.8	22.2
6H	20.8	21.8	21.2	22.1	22.5	21.2	22.2	21.6	22.5	22.9
8H	21.0	21.9	21.4	22.2	22.6	21.5	22.4	21.9	22.8	23.2
12H	21.0	21.9	21.5	22.3	22.7	21.8	22.6	22.2	23.0	23.4
8H 4H	20.6	21.5	21.0	21.8	22.2	20.7	21.7	21.2	22.0	22.4
6H	21.3	22.1	21.7	22.5	22.9	21.7	22.4	22.1	22.8	23.3
8H	21.6	22.2	22.0	22.7	23.1	22.1	22.8	22.6	23.2	23.7
12H	21.8	22.3	22.2	22.8	23.3	22.5	23.1	23.0	23.6	24.0
12H 4H	20.6	21.4	21.0	21.8	22.2	20.8	21.6	21.2	22.0	22.4
6H	21.4	22.1	21.9	22.5	23.0	21.8	22.4	22.2	22.9	23.3
8H	21.7	22.3	22.2	22.8	23.2	22.3	22.9	22.8	23.3	23.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.2					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 6341 lm Total Lamp Luminous Flux.(8log(F/F0) = 6.4)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm		
NAME: 3600414 - 60120 LED panel Colortech	TYPE:60W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:
MFR.:	SUR.:1.14X0.545	PROTECTION ANGLE:

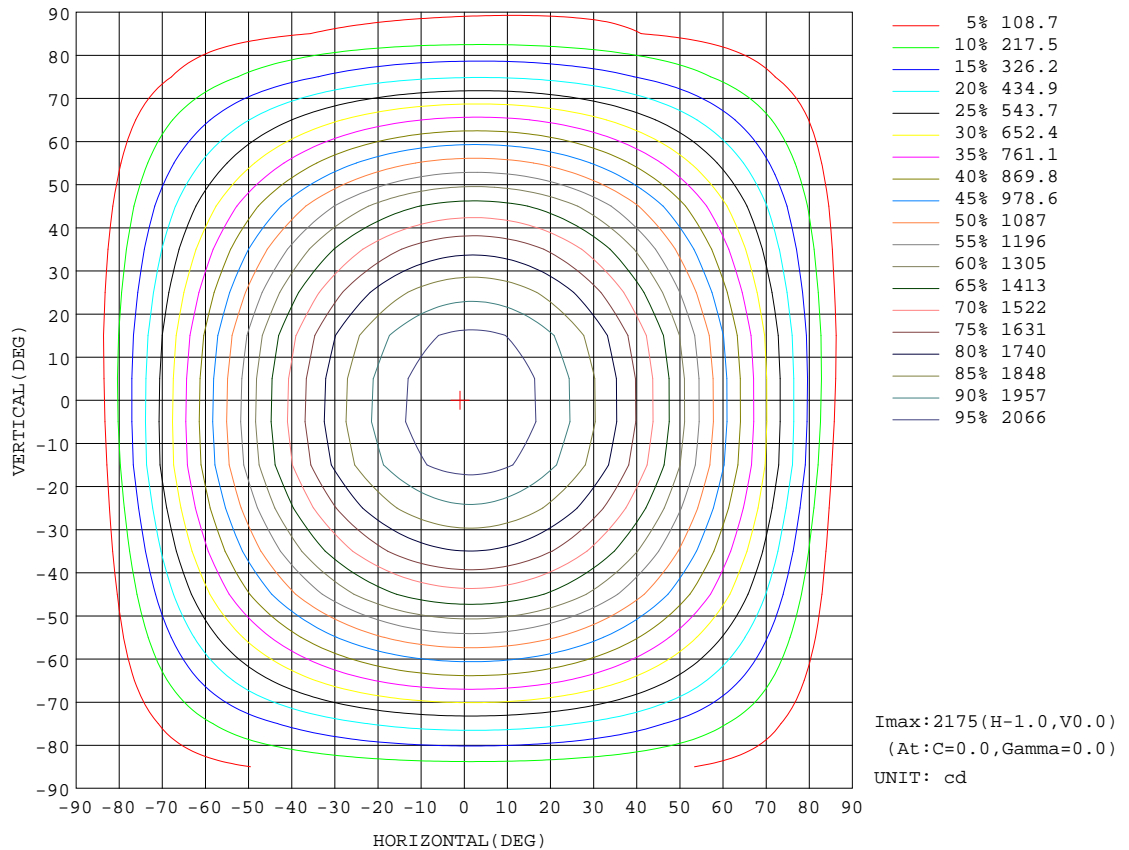
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	57	45	38	56	45	38	55	45	38	31
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	63	56	72	65	56	49
1.25	82	72	64	81	71	64	78	70	63	56
1.50	87	77	70	86	76	70	83	75	69	61
2.00	94	86	79	93	84	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	81	73
3.00	102	95	89	100	93	88	95	90	86	77
4.00	106	100	95	103	98	94	99	95	91	82
5.00	108	103	99	106	101	98	101	98	94	85
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm		
NAME: 3600414 - 60120 LED panel Colortech	TYPE:60W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:
MFR.:	SUR.:1.14X0.545	PROTECTION ANGLE:



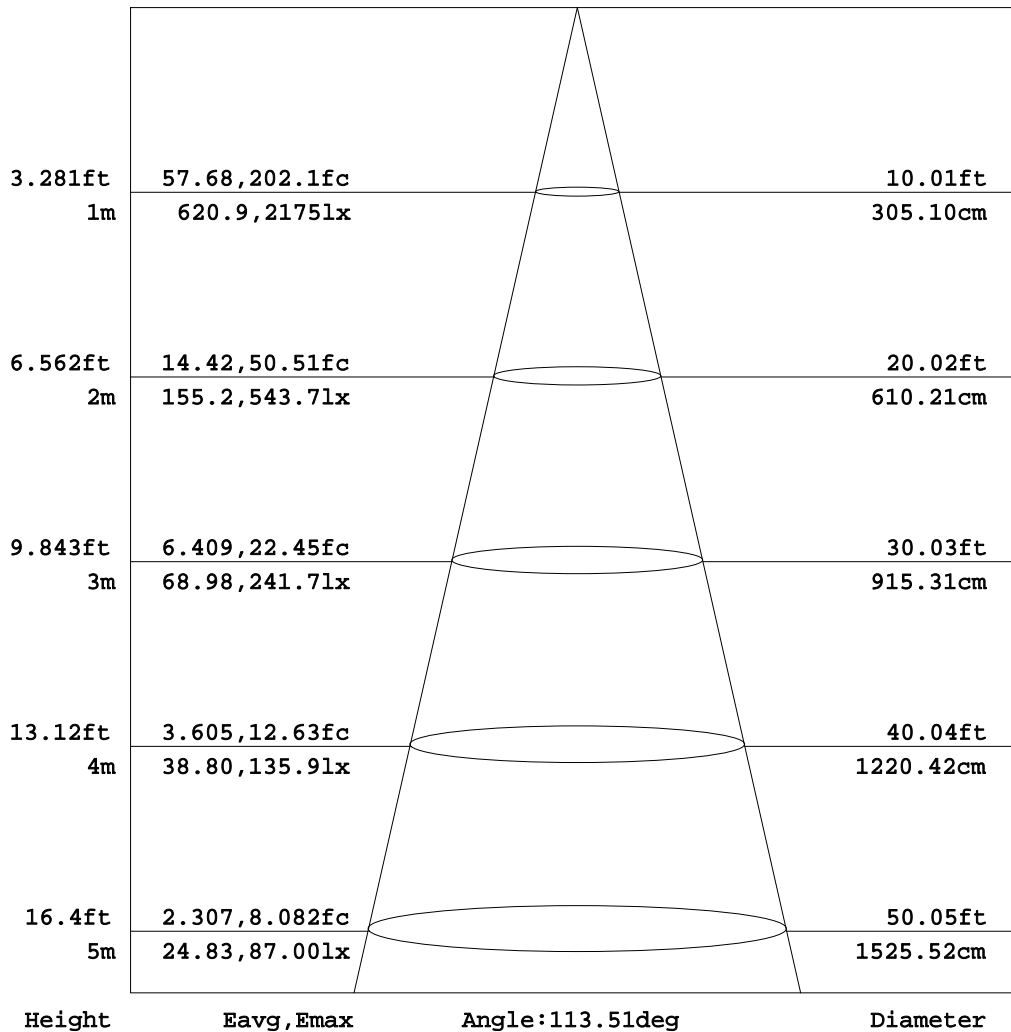
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm		
NAME: 3600414 - 60120 LED panel Colortech	TYPE:60W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:
MFR.:	SUR.:1.14X0.545	PROTECTION ANGLE:

Flux out:4625 lm



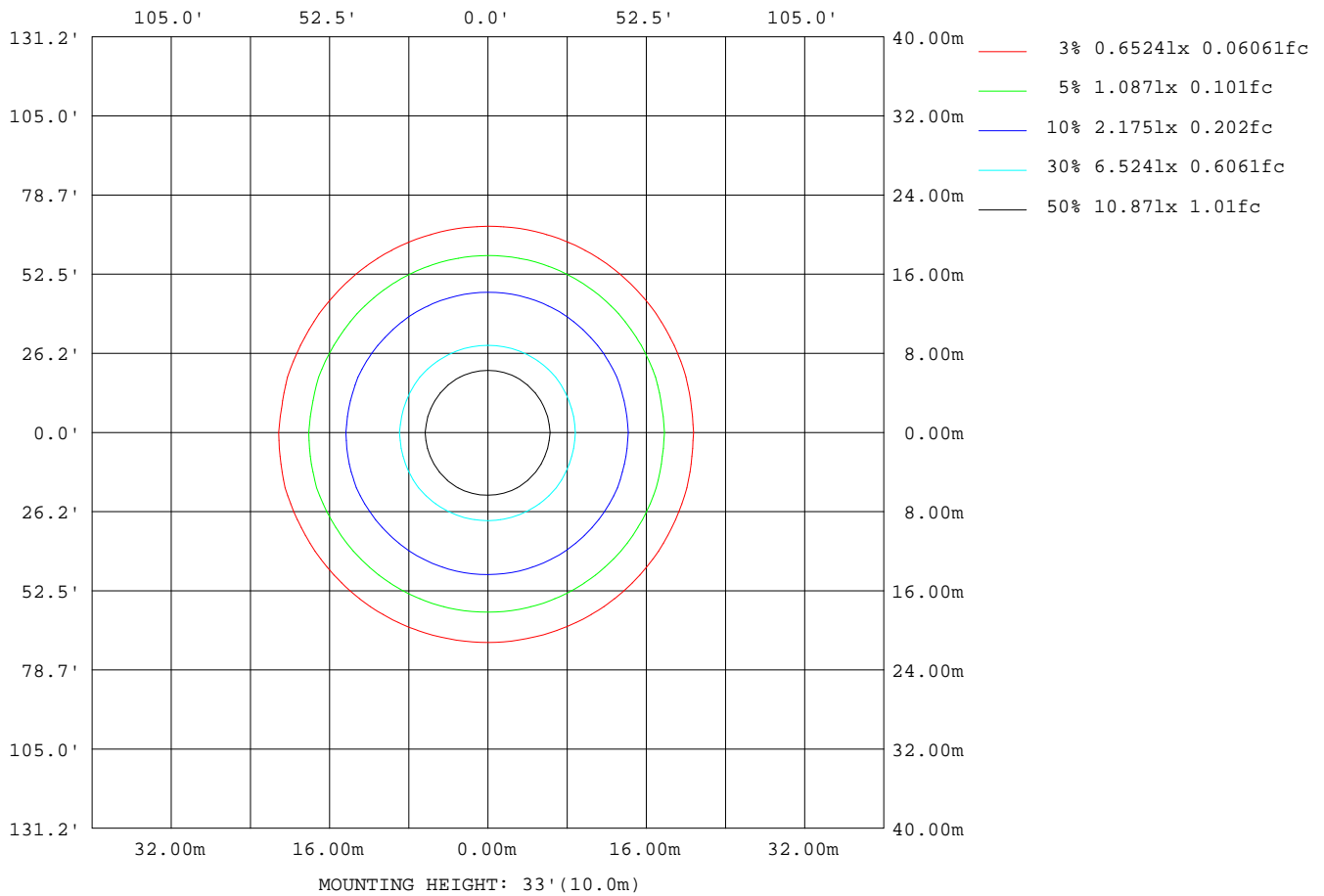
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity:65.0%
 Test Distance:9.443m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

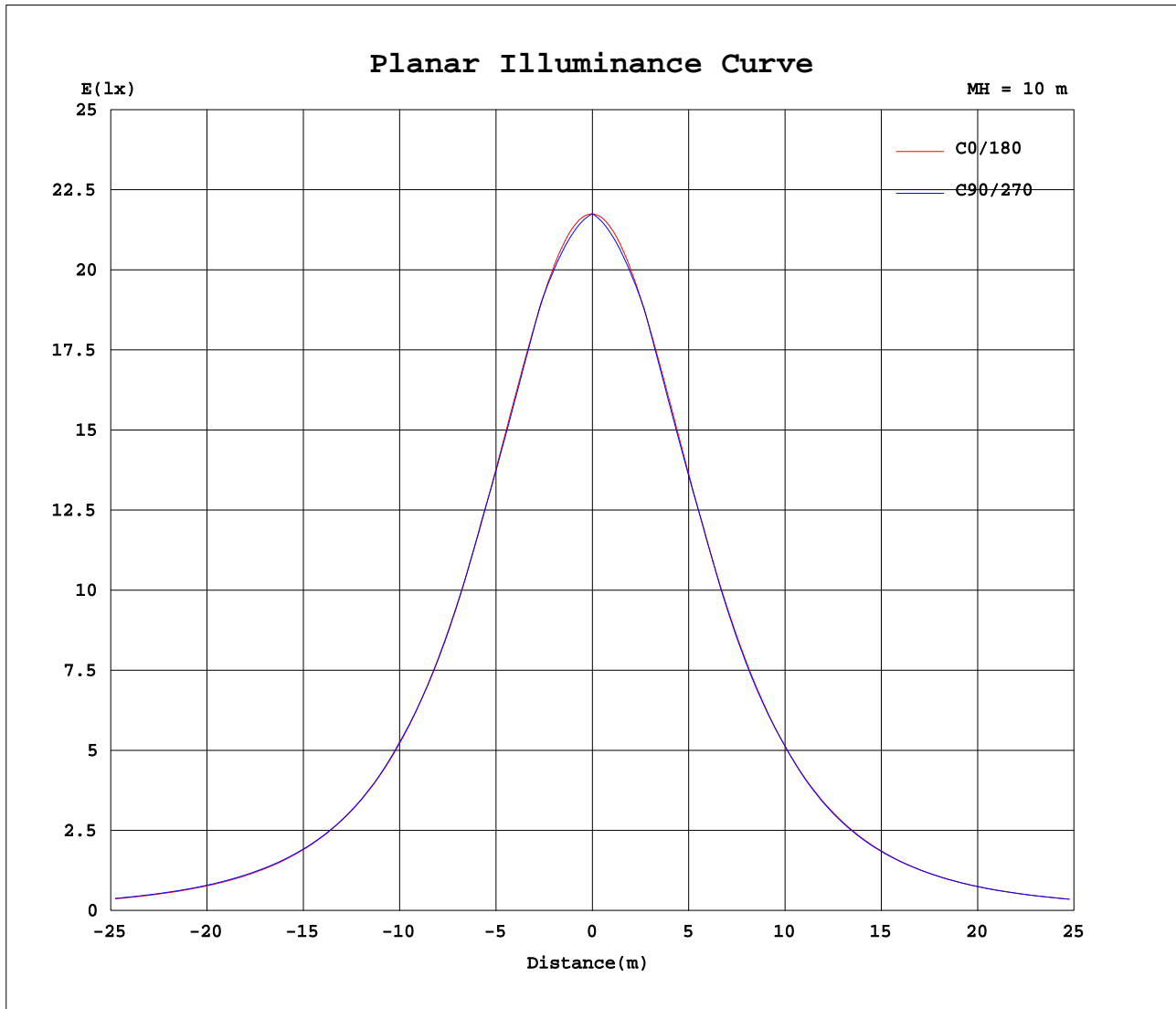
Test:U:240.0V I:0.2330A P:54.60W PF:0.9750 Lamp Flux:6340.55x1 lm		
NAME: 3600414 - 60120 LED panel Colortech	TYPE:60W	WEIGHT:
DIM.:	SPEC.:4000K	SERIAL No.:
MFR.:	SUR.:1.14X0.545	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 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: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-06-18

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.276
 Humidity: 65.0%
 Test Distance: 9.443m [K=1.0000]
 Remarks:

