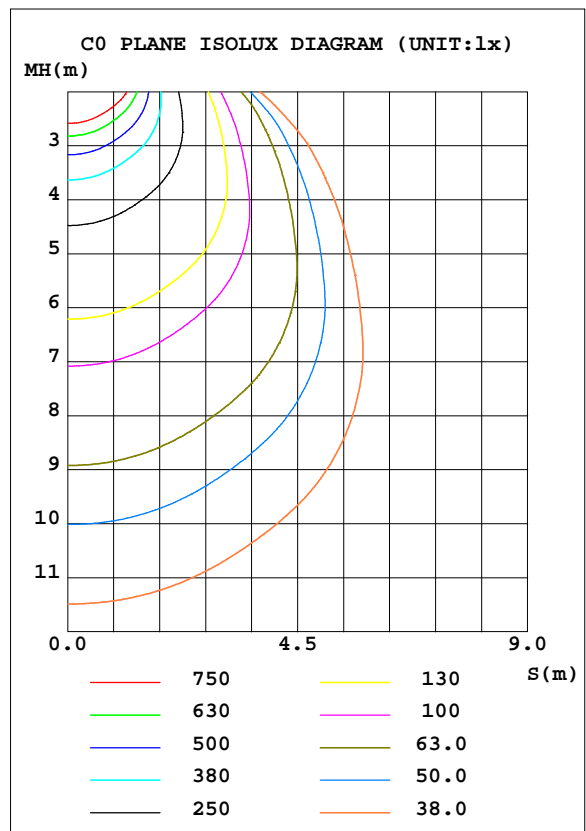
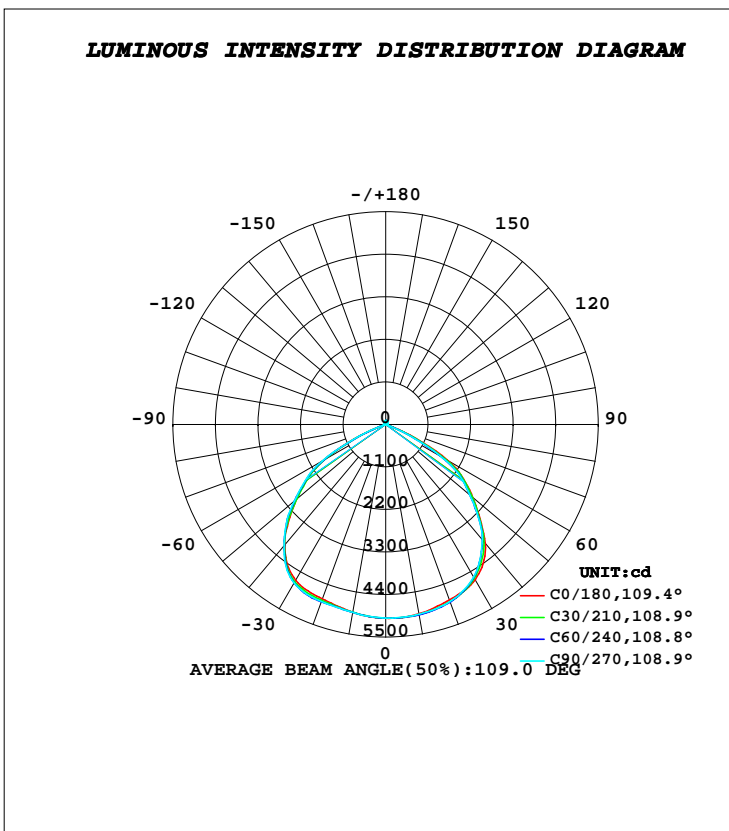


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	

DATA OF LAMP		PHOTOMETRIC DATA Eff: 126.26 lm/W			
MODEL	100W-16ALG-120°	I _{max} (cd)	5014	S/MH(C0/180)	1.36
NOMINAL POWER(W)	100	LOR(%)	100.0	S/MH(C90/270)	1.34
RATED VOLTAGE(V)	220.6	TOTAL FLUX(lm)	12942	η UP, DN(C0-180)	1.2, 47.4
NOMINAL FLUX(lm)	12941.6	CIE CLASS	DIRECT	η UP, DN(C180-360)	1.3, 50.1
LAMPS INSIDE	1	η up(%)	2.5	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	220.6	η down(%)	97.5	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	4970	4995	4984	4942	4933	4933	4937	4946	0- 10	475.4	475.4	3.67,3.67
20	4824	4879	4872	4796	4799	4859	4874	4805	10- 20	1386	1862	14.4,14.4
30	4632	4577	4555	4537	4653	4719	4734	4724	20- 30	2200	4062	31.4,31.4
40	4009	3925	3890	3907	4065	4072	4089	4164	30- 40	2738	6800	52.5,52.5
50	2947	2889	2850	2844	3020	3044	3083	3111	40- 50	2706	9506	73.5,73.5
60	1831	1700	1624	1636	1873	1837	1908	2027	50- 60	2180	11686	90.3,90.3
70	114.4	78.56	27.40	45.20	158.0	125.8	153.9	264.1	60- 70	872.7	12559	97,97
80	15.15	15.24	14.80	15.43	24.99	24.69	24.44	24.14	70- 80	32.55	12591	97.3,97.3
90	18.30	18.32	18.35	19.07	25.39	24.67	24.36	24.75	80- 90	22.47	12614	97.5,97.5
100	26.96	27.32	27.35	29.05	35.41	32.48	31.67	31.51	90-100	28.16	12642	97.7,97.7
110	37.78	37.98	38.36	38.83	43.37	42.75	42.39	42.32	100-110	37.29	12679	98,98
120	48.37	48.54	49.00	49.60	53.66	52.65	52.10	52.26	110-120	45.13	12724	98.3,98.3
130	58.18	58.44	58.99	59.37	62.85	61.88	61.42	61.64	120-130	49.94	12774	98.7,98.7
140	66.07	66.35	67.00	67.34	69.25	68.25	67.77	68.16	130-140	49.51	12824	99.1,99.1
150	75.79	76.12	76.80	77.12	76.95	75.89	75.23	75.76	140-150	44.90	12869	99.4,99.4
160	87.01	87.47	88.27	88.30	86.84	85.72	85.03	85.62	150-160	37.52	12906	99.7,99.7
170	97.10	97.20	97.43	97.56	96.40	95.91	95.70	95.79	160-170	25.98	12932	99.9,99.9
180	99.69	99.60	99.60	99.60	99.72	99.63	99.59	99.59	170-180	9.367	12942	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

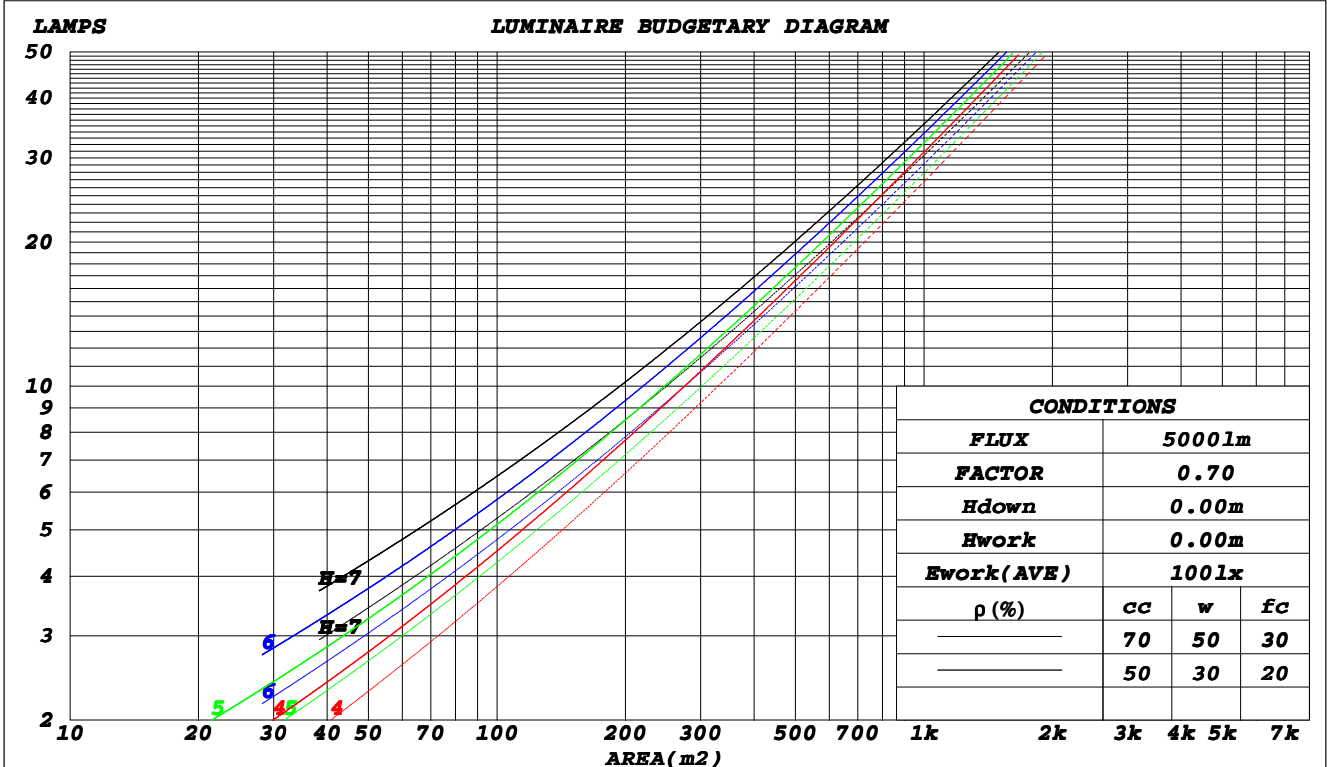
C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	

ρcc	80%			70%			50%			30%			10%			0
	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρw																
ρfc																
RCR	RCR:Room Cavity Ratio															
	Coefficients of Utilization(CU)															
0.0	1.18	1.18	1.18	1.15	1.15	1.15	1.10	1.10	1.10	1.04	1.04	1.04	.00	.00	.00	.97
1.0	1.07	1.03	1.00	1.04	1.01	.98	.00	.97	.95	.95	.93	.91	.91	.90	.88	.86
2.0	.95	.89	.84	.93	.88	.83	.89	.85	.81	.86	.82	.79	.82	.79	.77	.75
3.0	.85	.78	.72	.83	.76	.71	.80	.74	.70	.77	.72	.68	.74	.70	.67	.65
4.0	.76	.68	.62	.74	.67	.61	.71	.65	.60	.69	.64	.59	.67	.62	.58	.56
5.0	.68	.60	.54	.67	.59	.53	.64	.58	.53	.62	.56	.52	.60	.55	.51	.49
6.0	.61	.53	.47	.60	.53	.47	.58	.51	.46	.56	.50	.46	.55	.49	.45	.43
7.0	.56	.47	.42	.55	.47	.42	.53	.46	.41	.51	.45	.41	.50	.44	.40	.38
8.0	.51	.43	.37	.50	.42	.37	.49	.42	.37	.47	.41	.36	.46	.40	.36	.34
9.0	.47	.39	.34	.46	.38	.33	.45	.38	.33	.43	.37	.33	.42	.37	.33	.31
10.0	.43	.35	.30	.42	.35	.30	.41	.35	.30	.40	.34	.30	.39	.34	.30	.28



C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

WEC AND CCEC

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.246	.140	.044	.238	.136	.043	.224	.128	.041	.210	.121	.039	.198	.115	.037	
2.0	.242	.133	.041	.236	.130	.040	.223	.124	.039	.211	.119	.037	.201	.114	.036	
3.0	.232	.124	.037	.226	.121	.037	.215	.117	.035	.205	.112	.034	.195	.108	.033	
4.0	.220	.115	.034	.215	.113	.033	.205	.109	.032	.196	.105	.032	.187	.102	.031	
5.0	.208	.106	.031	.203	.104	.030	.194	.101	.030	.186	.098	.029	.178	.095	.029	
6.0	.196	.098	.028	.192	.097	.028	.184	.094	.027	.176	.092	.027	.169	.089	.026	
7.0	.185	.091	.026	.181	.090	.026	.174	.088	.025	.167	.086	.025	.161	.083	.025	
8.0	.174	.085	.024	.171	.084	.024	.164	.082	.023	.158	.080	.023	.152	.078	.023	
9.0	.165	.080	.022	.161	.079	.022	.156	.077	.022	.150	.075	.022	.145	.074	.021	
10.0	.156	.075	.021	.153	.074	.021	.148	.072	.020	.143	.071	.020	.138	.069	.020	

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.210	.210	.210	.179	.179	.179	.122	.122	.122	.070	.070	.070	.022	.022	.022	
1.0	.195	.176	.159	.167	.151	.137	.114	.104	.095	.066	.060	.055	.021	.019	.018	
2.0	.185	.152	.124	.159	.131	.107	.109	.090	.075	.063	.053	.044	.020	.017	.014	
3.0	.177	.134	.099	.152	.115	.086	.104	.080	.060	.060	.047	.036	.019	.015	.012	
4.0	.170	.120	.082	.145	.104	.072	.100	.072	.050	.058	.042	.030	.019	.014	.010	
5.0	.163	.110	.070	.140	.095	.061	.096	.066	.043	.056	.039	.026	.018	.013	.008	
6.0	.156	.101	.062	.134	.088	.054	.093	.061	.038	.054	.036	.023	.017	.012	.007	
7.0	.150	.094	.055	.129	.082	.048	.089	.057	.034	.052	.034	.020	.017	.011	.007	
8.0	.144	.088	.050	.124	.077	.044	.086	.054	.031	.050	.032	.018	.016	.010	.006	
9.0	.139	.084	.046	.119	.073	.040	.083	.051	.029	.048	.030	.017	.016	.010	.006	
10.0	.134	.079	.043	.115	.069	.038	.080	.048	.027	.047	.029	.016	.015	.009	.005	

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity:65.0%
 Test Distance:8.000m [K=0.7063]
 Remarks:

Uncorrected UGR Table

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	

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	2H	23.4	22.4	23.7	23.9	21.7	23.1	22.0	23.3	23.5
	3H	23.3	22.4	23.6	23.8	21.6	22.8	21.9	23.1	23.4
	4H	23.1	22.3	23.4	23.7	21.5	22.7	21.8	23.0	23.3
	6H	22.9	22.2	23.2	23.6	21.4	22.5	21.8	22.8	23.1
	8H	22.8	22.2	23.2	23.5	21.3	22.4	21.7	22.7	23.0
	12H	22.7	22.1	23.1	23.4	21.3	22.3	21.7	22.6	23.0
4H	2H	23.3	22.5	23.6	23.9	21.8	23.0	22.2	23.3	23.6
	3H	23.2	22.5	23.5	23.8	21.8	22.7	22.1	23.1	23.4
	4H	23.0	22.5	23.3	23.7	21.7	22.5	22.1	22.9	23.3
	6H	22.7	22.4	23.1	23.5	21.6	22.3	22.0	22.7	23.1
	8H	22.6	22.4	23.0	23.5	21.5	22.2	22.0	22.6	23.1
	12H	22.5	22.3	23.0	23.4	21.5	22.1	21.9	22.5	23.0
8H	4H	22.6	22.4	23.0	23.5	21.5	22.2	22.0	22.6	23.1
	6H	22.4	22.3	22.9	23.3	21.4	22.0	21.9	22.5	22.9
	8H	22.3	22.3	22.8	23.3	21.4	21.9	21.9	22.4	22.9
	12H	22.2	22.2	22.7	23.2	21.3	21.8	21.8	22.3	22.8
12H	4H	22.5	22.3	22.9	23.4	21.5	22.1	21.9	22.5	23.0
	6H	22.3	22.3	22.8	23.3	21.4	21.9	21.9	22.4	22.9
	8H	22.2	22.2	22.7	23.2	21.3	21.8	21.8	22.3	22.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.6 / - 0.8					+ 0.6 / - 0.8				
1.5H	+ 0.8 / - 1.1					+ 0.8 / - 1.2				
2.0H	+ 1.0 / - 2.3					+ 1.1 / - 3.0				

CIE Pub.117 Corrected 12942 lm Total Lamp Luminous Flux.(8log(F/F0) = 8.9)

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	

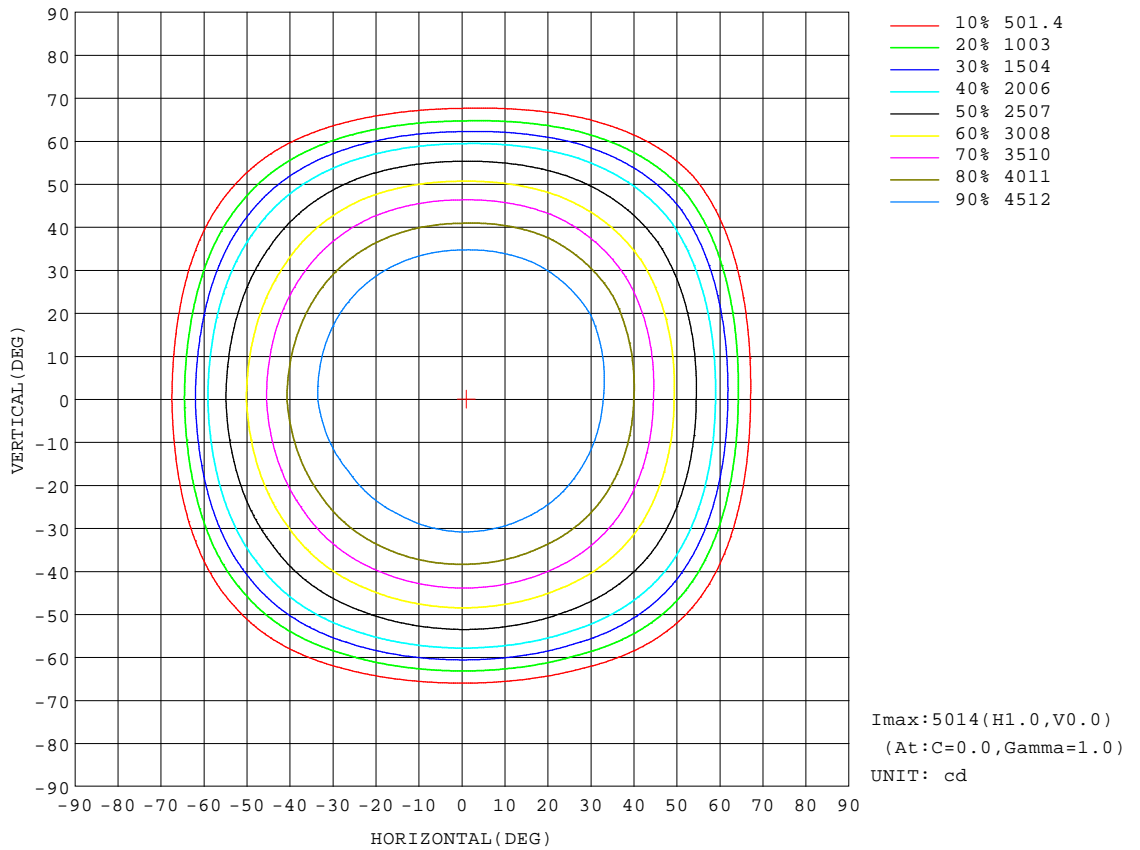
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	61	50	44	60	50	43	59	49	43	37
0.80	72	61	55	71	61	54	69	60	54	47
1.00	81	71	65	80	71	64	77	71	64	57
1.25	88	79	73	87	78	73	84	77	72	65
1.50	93	85	79	91	84	78	88	82	77	70
2.00	99	92	87	97	91	86	94	88	84	77
2.50	102	96	91	100	94	90	96	92	88	80
3.00	105	100	95	103	98	94	99	95	91	83
4.00	108	104	100	106	102	98	101	98	95	86
5.00	110	106	103	108	104	101	103	100	98	88
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:2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

ISOCANDELA DIAGRAM

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	



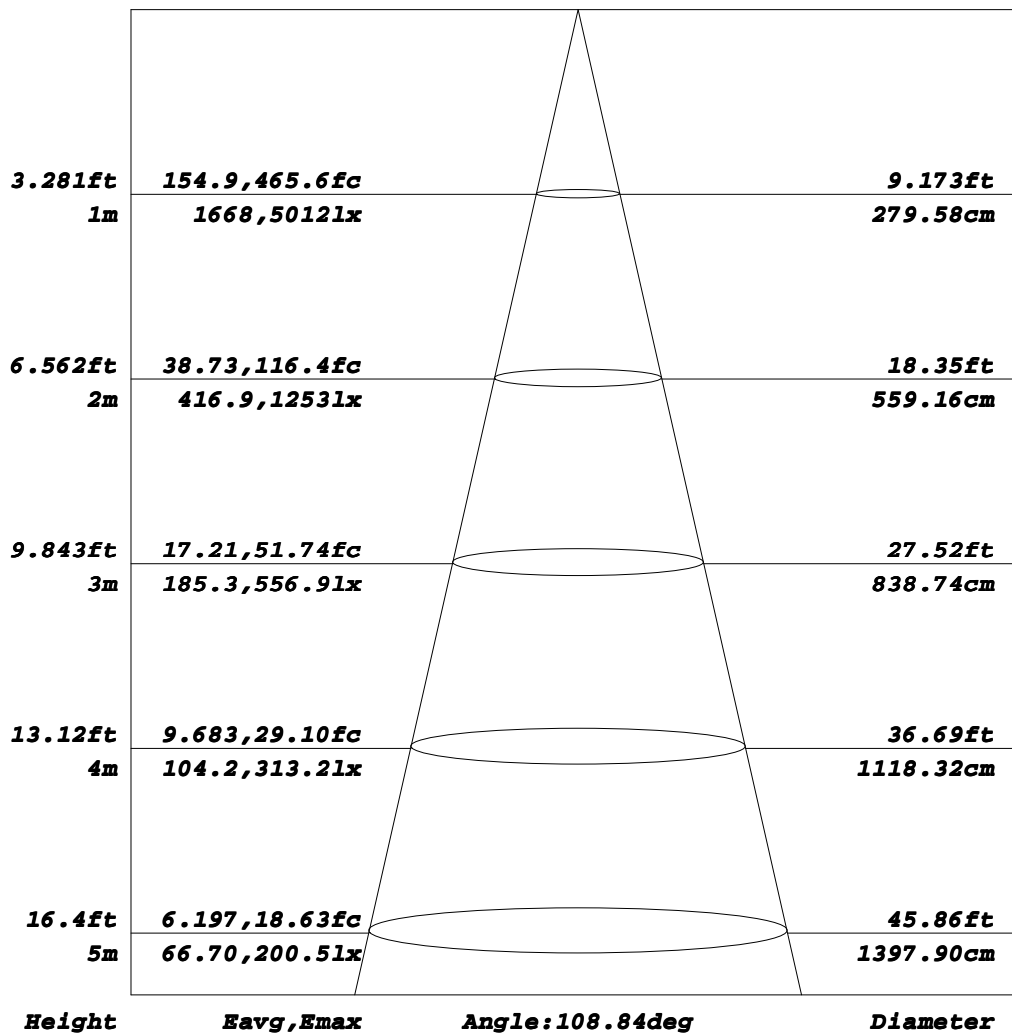
C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks:

AAI Figure

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	

Flux out:10685 lm



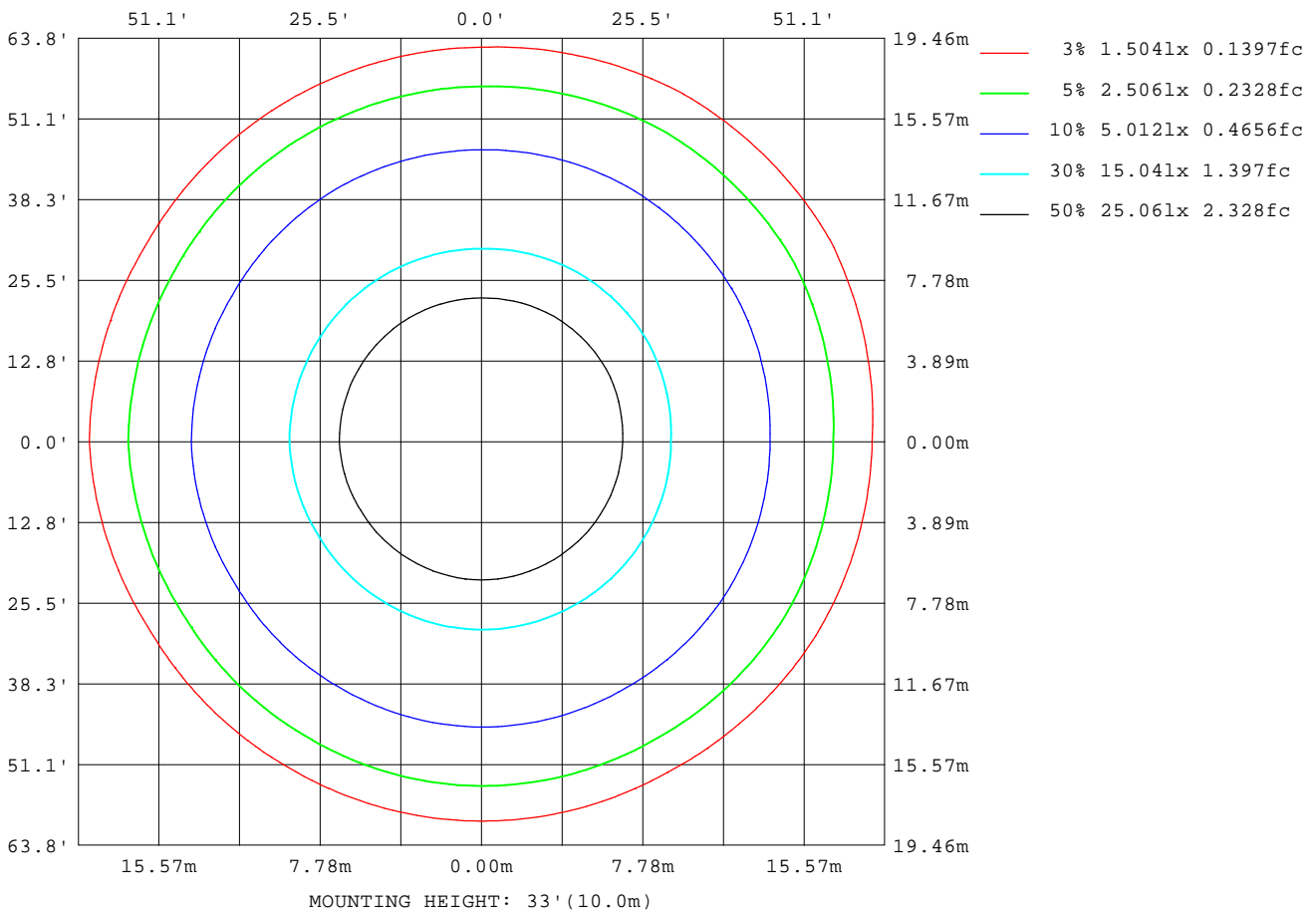
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 30.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2017-06-12

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
 Humidity: 65.0%
 Test Distance: 8.000m [K=0.7063]
 Remarks:

ISOLUX DIAGRAM

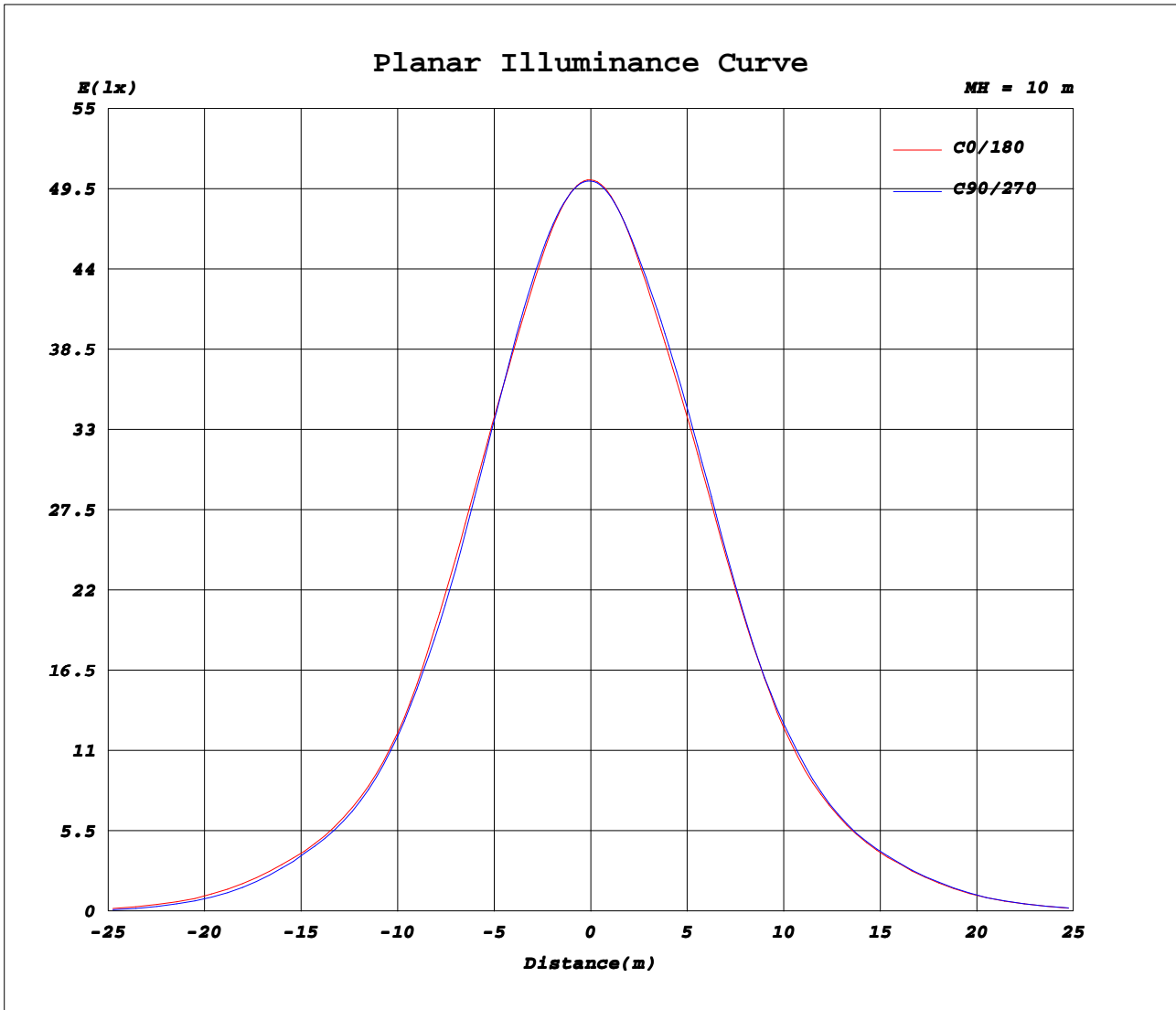
Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2017-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity: 65.0%
Test Distance: 8.000m [K=0.7063]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:220.6V I:0.4680A P:102.5W PF:0.9910 Lamp Flux:12941.6x1 lm		
NAME: 100W-16ALG-120°	TYPE:LED	
MFR.:	SUR.:530*530mm	

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	30	60	90	120	150	180	210	240	270	300	330							
0	5012	5010	5009	5004	5001	4999	5012	5010	5009	5004	5001	4999							
5	5007	5013	5010	5004	4991	4978	4989	4982	4982	4981	4987	4991							
10	4970	4992	4998	4984	4957	4927	4933	4928	4937	4937	4943	4948							
15	4904	4943	4957	4944	4898	4851	4860	4876	4892	4894	4878	4868							
20	4824	4872	4886	4872	4820	4771	4799	4840	4879	4874	4817	4793							
25	4757	4768	4761	4745	4705	4689	4754	4805	4848	4842	4795	4759							
30	4632	4593	4562	4555	4526	4548	4653	4703	4735	4734	4736	4713							
35	4395	4326	4261	4257	4256	4306	4434	4460	4478	4492	4537	4527							
40	4009	3955	3894	3890	3888	3926	4065	4068	4076	4089	4165	4164							
45	3458	3437	3396	3390	3360	3393	3558	3589	3636	3637	3707	3639							
50	2947	2928	2850	2850	2827	2861	3020	3004	3083	3083	3134	3089							
55	2459	2443	2374	2371	2334	2353	2497	2466	2530	2535	2588	2580							
60	1831	1775	1624	1624	1598	1673	1873	1816	1858	1908	2022	2032							
65	874	798	679	683	664	712	916	861	900	945	1098	1128							
70	114	103	54.2	27.4	54.7	35.7	158	110	142	154	252	276							
75	15.4	15.5	15.4	15.0	15.1	15.6	26.0	26.2	26.2	26.2	25.9	25.4							
80	15.1	15.3	15.2	14.8	15.1	15.8	25.0	24.8	24.6	24.4	24.3	24.0							
85	16.5	16.9	16.7	16.1	16.5	17.7	25.6	24.8	24.1	24.1	24.0	24.1							
90	18.3	18.2	18.4	18.3	18.9	19.2	25.4	25.0	24.4	24.4	24.7	24.8							
95	22.7	23.4	23.3	22.6	23.4	25.4	30.6	29.0	27.3	27.2	27.3	27.6							
100	27.0	27.2	27.4	27.3	28.1	30.0	35.4	33.3	31.7	31.7	31.3	31.7							
105	32.5	32.4	32.8	33.0	33.6	33.6	38.4	38.1	37.3	37.3	37.0	37.3							
110	37.8	37.8	38.2	38.4	38.8	38.8	43.4	43.0	42.5	42.4	42.2	42.4							
115	43.0	43.0	43.4	43.6	44.1	44.1	48.1	47.8	47.2	47.2	47.0	47.2							
120	48.4	48.4	48.6	49.0	49.4	49.8	53.7	52.8	52.5	52.1	52.3	52.2							
125	53.6	53.9	53.8	54.4	54.5	55.1	58.6	57.7	57.4	57.1	57.3	57.2							
130	58.2	58.5	58.3	59.0	59.1	59.7	62.9	61.9	61.8	61.4	61.8	61.5							
135	62.2	62.6	62.4	63.1	63.1	63.7	66.2	65.3	65.3	64.9	65.3	65.0							
140	66.1	66.5	66.2	67.0	67.0	67.7	69.2	68.2	68.3	67.8	68.3	68.0							
145	70.6	71.0	70.7	71.6	71.6	72.3	72.8	71.7	71.7	71.1	71.7	71.4							
150	75.8	76.3	76.0	76.8	76.8	77.5	77.0	75.9	75.9	75.2	75.9	75.6							
155	81.3	81.9	81.5	82.5	82.4	83.1	81.6	80.5	80.6	79.8	80.6	80.3							
160	87.0	87.7	87.3	88.3	87.9	88.7	86.8	85.6	85.8	85.0	85.8	85.5							
165	93.2	93.1	93.5	93.7	94.0	93.8	92.3	92.0	91.2	91.5	91.2	91.8							
170	97.1	97.1	97.3	97.4	97.6	97.5	96.4	96.1	95.7	95.7	95.6	95.9							
175	99.3	99.3	99.4	99.5	99.6	99.5	98.4	98.3	98.1	98.1	98.1	98.2							
180	99.7	99.6	99.6	99.6	99.6	99.6	99.7	99.6	99.6	99.6	99.6	99.5							

C Range: 0 - 360DEG
C Interval: 30.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2017-06-12

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000B_V1 SYSTEM V2.0.267
Humidity:65.0%
Test Distance:8.000m [K=0.7063]
Remarks: