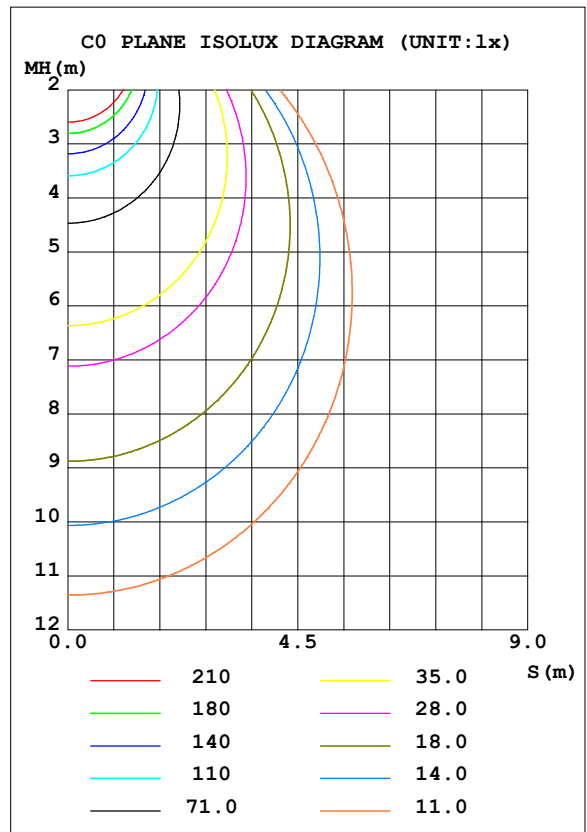
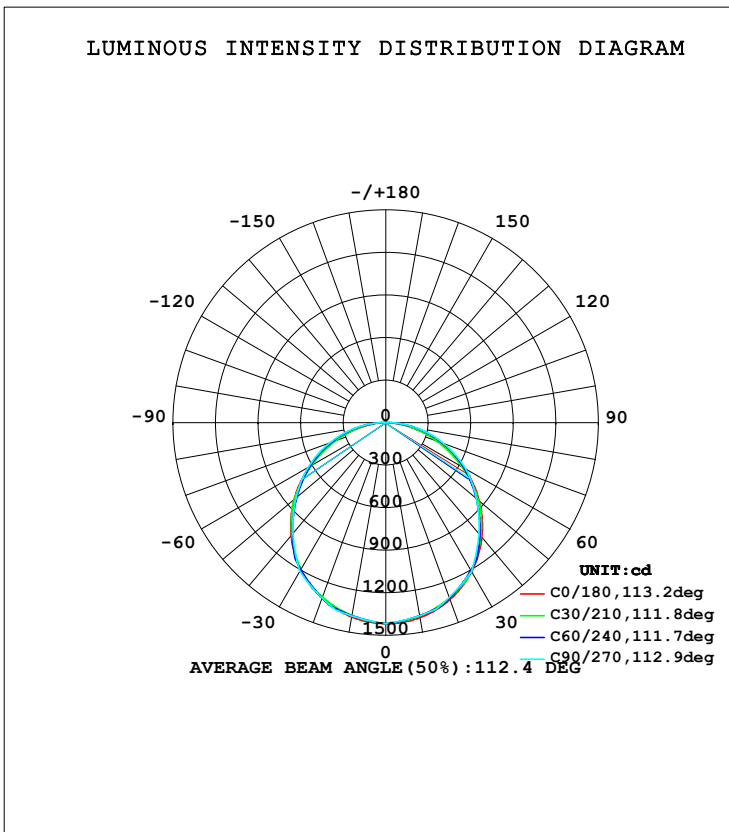


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 103.19 lm/W			
MODEL		I _{max} (cd)	1418	S/MH (C0/180)	1.26
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)		TOTAL FLUX (lm)	4099.6	η UP, DN (C0-180)	0.0, 50.0
NOMINAL FLUX (lm)	4099.6	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0, 50.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)		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: 2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity: 65.0%
 Test Distance: 9.646m [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	1413	1403	1399	1401	1411	1402	1401	1404	0- 5	33.68	33.68	0.82,0.82
10	1396	1382	1381	1378	1391	1380	1384	1384	5- 10	99.65	133.3	3.25,3.25
15	1367	1355	1363	1350	1360	1352	1367	1358	10- 15	162.5	295.9	7.22,7.22
20	1326	1323	1312	1316	1317	1319	1315	1327	15- 20	220.3	516.2	12.6,12.6
25	1275	1265	1261	1257	1263	1260	1263	1269	20- 25	270.2	786.4	19.2,19.2
30	1212	1199	1209	1191	1199	1192	1212	1203	25- 30	311.6	1098	26.8,26.8
35	1138	1129	1116	1121	1124	1121	1115	1133	30- 35	342.5	1441	35.1,35.1
40	1054	1051	1023	1043	1039	1042	1019	1054	35- 40	360.1	1801	43.9,43.9
45	961.9	943.8	929.4	935.6	945.6	932.5	922.8	945.6	40- 45	365.2	2166	52.8,52.8
50	860.9	836.1	836.0	827.6	844.4	822.2	826.6	835.9	45- 50	358.6	2525	61.6,61.6
55	753.2	729.2	742.6	719.5	737.0	713.0	730.3	727.2	50- 55	341.1	2866	69.9,69.9
60	639.4	623.4	649.3	611.5	623.6	605.0	634.0	619.8	55- 60	313.8	3179	77.6,77.6
65	518.8	519.4	542.5	504.6	506.1	499.4	528.6	514.6	60- 65	277.2	3457	84.3,84.3
70	397.7	413.8	435.6	398.0	386.5	395.2	423.2	409.0	65- 70	231.9	3689	90,90
75	279.4	306.6	328.8	293.6	269.6	292.8	317.8	303.3	70- 75	181.2	3870	94.4,94.4
80	168.1	203.0	222.0	193.9	160.1	193.7	212.4	200.7	75- 80	128.1	3998	97.5,97.5
85	66.16	102.2	115.2	97.66	60.70	96.99	107.0	100.5	80- 85	75.98	4074	99.4,99.4
90	1.645	3.036	8.328	3.363	1.720	1.634	1.651	1.577	85- 90	25.69	4100	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			

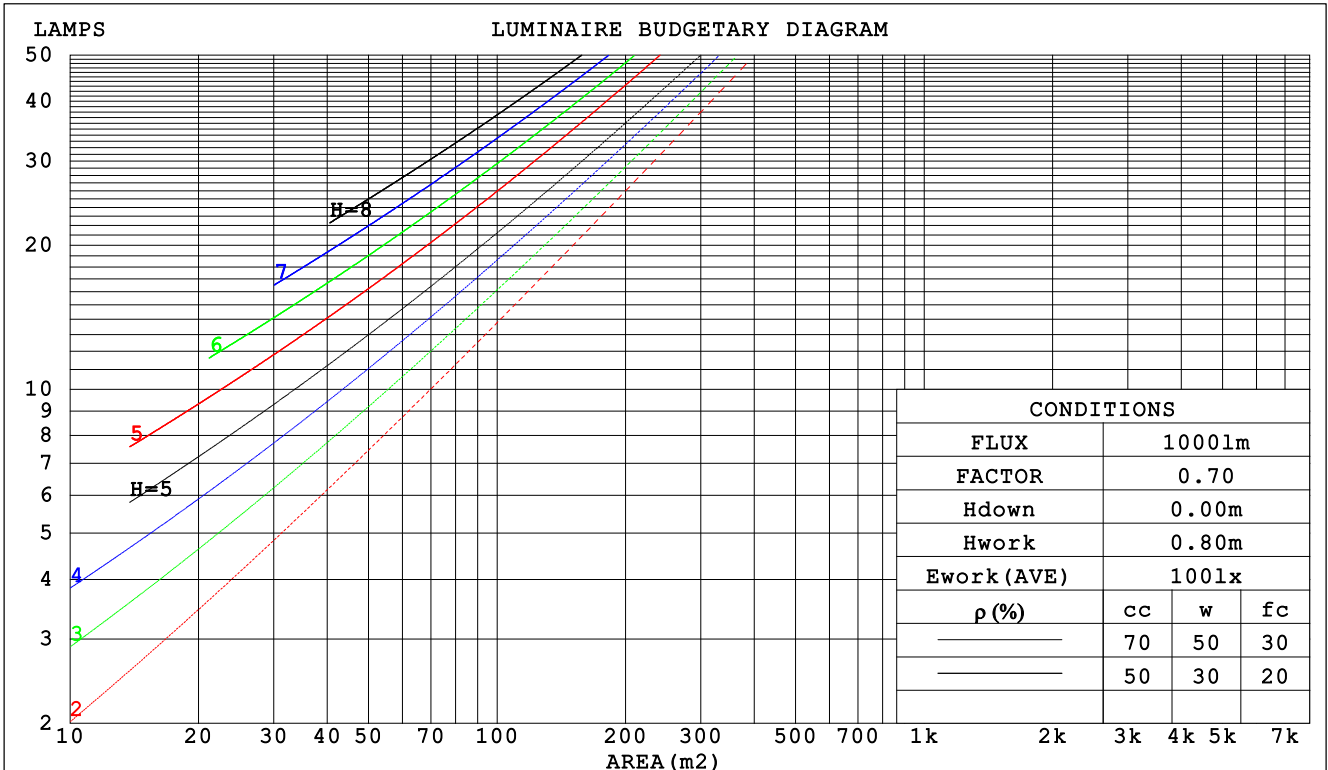
C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 γ Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

ρcc	80%			70%			50%			30%			10%			0			
	ρw	50%	30%	10%	ρw	50%	30%	10%	ρw	50%	30%	10%	ρw	50%	30%	10%	ρw	50%	30%
ρfc	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	1.03	.99	.95	1.01	.97	.93	.97	.94	.90	.93	.90	.88	.89	.87	.85	.83			
2.0	.90	.83	.77	.88	.82	.76	.84	.79	.74	.81	.77	.73	.78	.74	.71	.69			
3.0	.79	.70	.64	.77	.69	.63	.74	.68	.62	.71	.66	.61	.69	.64	.60	.58			
4.0	.70	.61	.54	.68	.60	.54	.66	.59	.53	.63	.57	.52	.61	.56	.51	.49			
5.0	.62	.53	.46	.61	.52	.46	.59	.51	.46	.57	.50	.45	.55	.49	.45	.42			
6.0	.56	.47	.40	.55	.46	.40	.53	.46	.40	.51	.45	.39	.50	.44	.39	.37			
7.0	.51	.42	.36	.50	.41	.36	.48	.41	.35	.47	.40	.35	.46	.39	.35	.33			
8.0	.46	.38	.32	.46	.37	.32	.44	.37	.31	.43	.36	.31	.42	.36	.31	.29			
9.0	.42	.34	.29	.42	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.26			
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.25	.24			



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm												
NAME:				TYPE:				WEIGHT:				
SPEC.:				DIM.:				SERIAL No.:				
MFR.:				SUR.:				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	.181	.057	.312	.178	.056	.298	.171	.055	.286	.165	.053	.275	.159	.051	
2.0	.297	.163	.050	.291	.160	.049	.279	.155	.048	.268	.151	.047	.258	.146	.046	
3.0	.274	.146	.044	.268	.144	.043	.258	.140	.042	.248	.136	.042	.239	.133	.041	
4.0	.252	.131	.038	.247	.129	.038	.238	.126	.038	.229	.123	.037	.221	.120	.037	
5.0	.232	.118	.034	.228	.117	.034	.220	.114	.034	.212	.112	.033	.205	.110	.033	
6.0	.215	.108	.031	.211	.107	.031	.204	.105	.030	.197	.103	.030	.191	.101	.030	
7.0	.200	.099	.028	.197	.098	.028	.190	.096	.028	.184	.094	.027	.178	.093	.027	
8.0	.187	.091	.026	.184	.090	.026	.178	.089	.025	.172	.087	.025	.167	.086	.025	
9.0	.175	.085	.024	.172	.084	.024	.167	.083	.023	.162	.081	.023	.157	.080	.023	
10.0	.164	.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	.010	.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	.020	.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:2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm										
NAME:					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					SUR.:			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	17.7	19.3	18.0	19.5	19.7	17.8	19.3	18.0	19.5	19.7
3H	19.2	20.6	19.5	20.9	21.1	19.5	20.9	19.8	21.2	21.4
4H	19.8	21.1	20.1	21.4	21.6	20.3	21.6	20.6	21.9	22.2
6H	20.1	21.4	20.5	21.7	21.9	20.9	22.2	21.3	22.5	22.8
8H	20.2	21.5	20.6	21.7	22.0	21.2	22.4	21.5	22.7	23.0
12H	20.3	21.5	20.6	21.8	22.1	21.4	22.6	21.7	22.9	23.2
4H 2H	18.3	19.7	18.7	19.9	20.2	18.4	19.8	18.7	20.0	20.3
3H	20.0	21.2	20.4	21.5	21.8	20.3	21.5	20.7	21.8	22.1
4H	20.7	21.8	21.0	22.1	22.4	21.3	22.4	21.6	22.7	23.0
6H	21.1	22.1	21.5	22.5	22.8	22.1	23.0	22.5	23.4	23.8
8H	21.3	22.2	21.7	22.6	22.9	22.4	23.3	22.8	23.7	24.1
12H	21.4	22.2	21.8	22.6	23.0	22.7	23.5	23.1	23.9	24.3
8H 4H	21.0	21.9	21.4	22.3	22.7	21.6	22.5	22.0	22.8	23.2
6H	21.7	22.4	22.1	22.8	23.3	22.5	23.3	23.0	23.7	24.1
8H	21.9	22.6	22.4	23.0	23.5	23.0	23.7	23.5	24.1	24.5
12H	22.1	22.7	22.6	23.1	23.6	23.4	24.0	23.9	24.4	24.9
12H 4H	21.1	21.9	21.5	22.3	22.7	21.6	22.4	22.0	22.8	23.2
6H	21.8	22.5	22.3	22.9	23.3	22.6	23.3	23.1	23.7	24.2
8H	22.1	22.7	22.6	23.1	23.6	23.1	23.7	23.6	24.1	24.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.3 / - 0.4					+ 0.1 / - 0.3				

CIE Pub.117 Corrected 4100 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.9)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	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	46	38	56	45	38	55	45	38	32
0.80	67	55	48	66	55	48	64	54	47	40
1.00	75	64	57	74	64	57	72	65	56	49
1.25	83	72	65	81	71	64	78	70	63	56
1.50	88	78	70	86	77	70	83	75	69	61
2.00	94	86	79	93	85	78	89	82	77	69
2.50	98	90	84	96	89	83	92	86	82	73
3.00	102	95	89	100	93	88	96	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	95	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:2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:

Conical surface Flux(90deg):

2165.9 lm

%lum = 52.8%

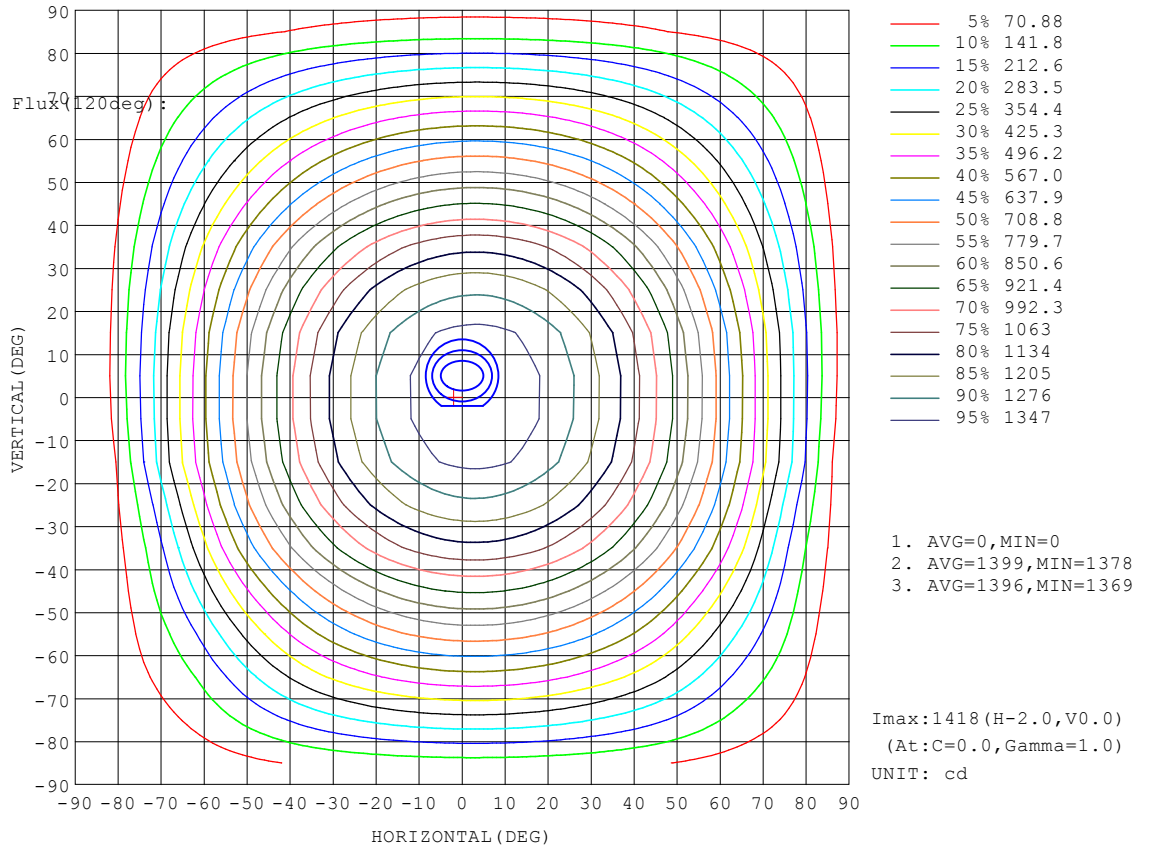
%lamp = 52.8%

Conical surface Flux(20deg):

3179.5 lm

%lum = 77.6%

%lamp = 77.6%

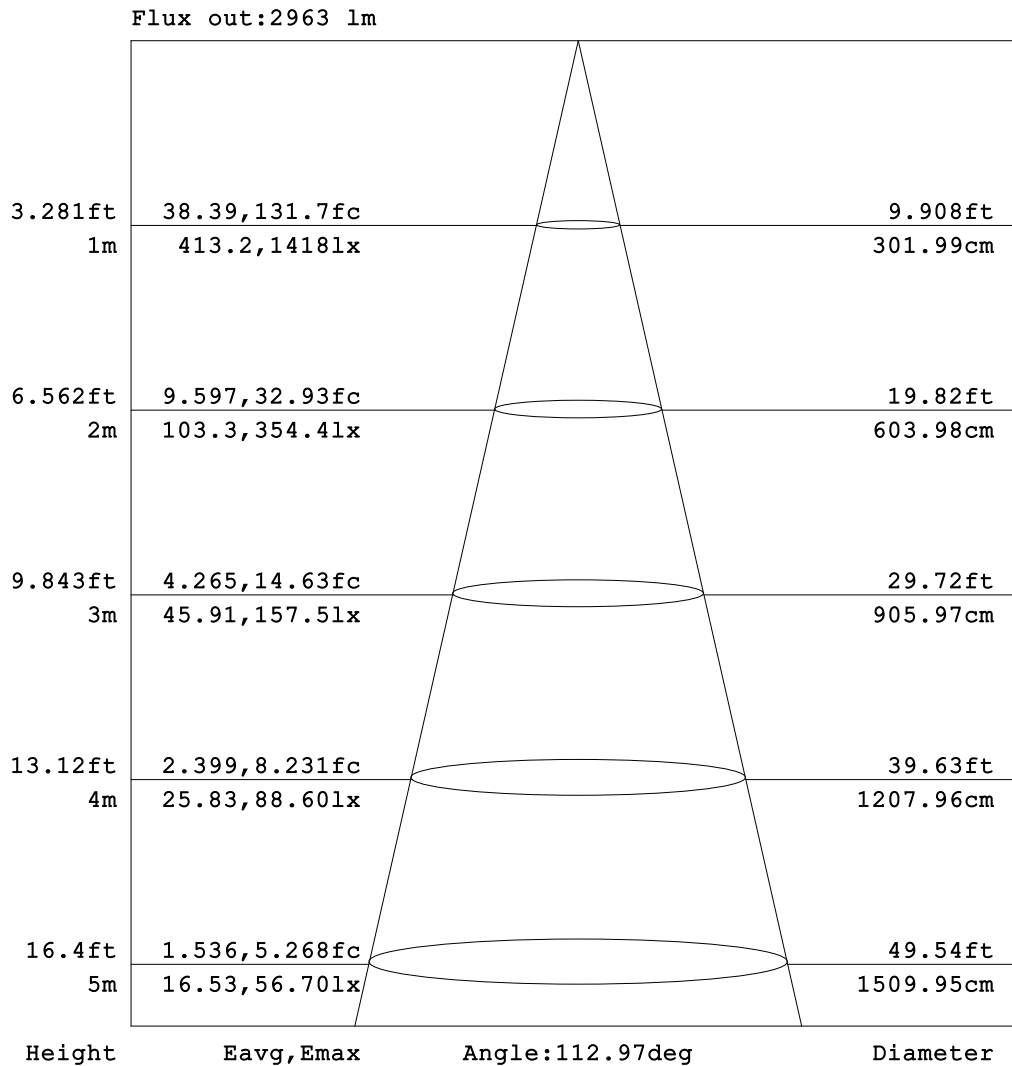


C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [K=1.0000]
 Remarks:

AAI Figure

Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



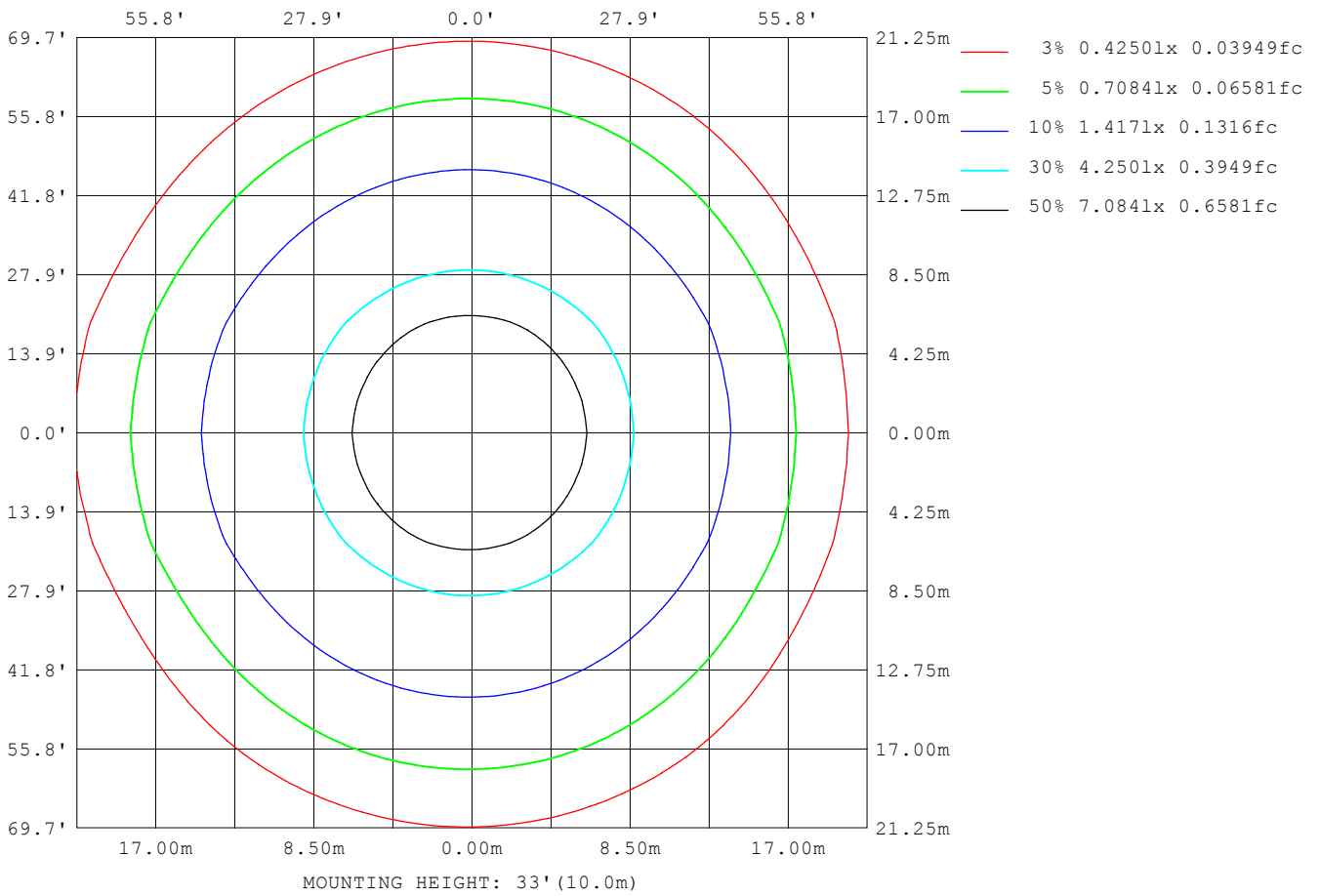
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity: 65.0%
 Test Distance: 9.646m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM

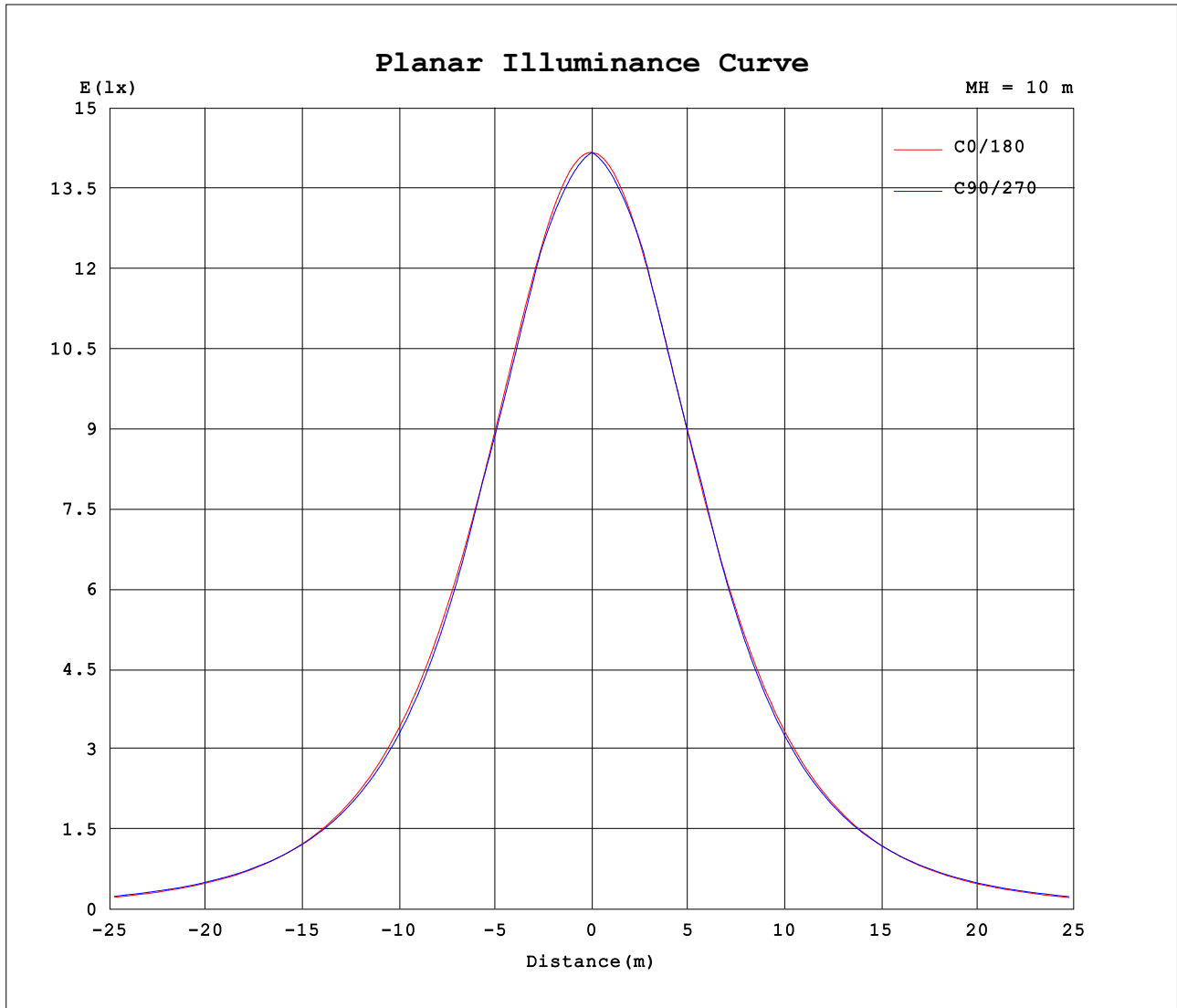
Test:U:120.2V I:0.3318A P:39.73W PF:0.9963 Lamp Flux:4099.6x1 lm		
NAME:	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	PROTECTION ANGLE:



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity:65.0%
 Test Distance:9.646m [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: 2019-10-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.286
 Humidity: 65.0%
 Test Distance: 9.646m [K=1.0000]
 Remarks:

