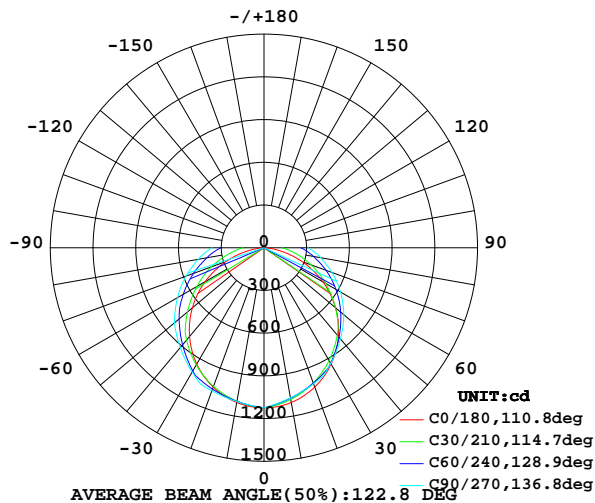


LUMINAIRE PHOTOMETRIC TEST REPORT

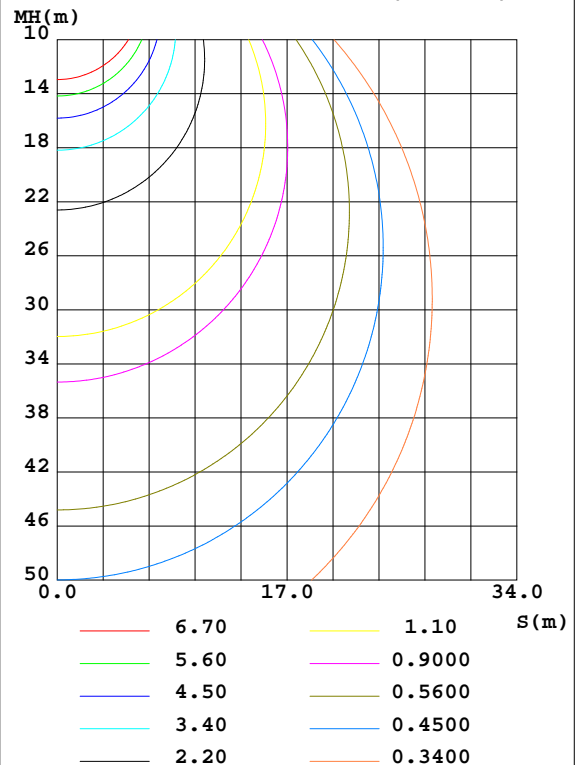
Test:U:120.4V I:0.2427A P:29.08W PF:0.9950 Lamp Flux:3737.63x1 lm		
NAME: MSS4-20/30/40/347/D10/W/35-40-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 128.52 lm/W			
MODEL	4000K	I _{max} (cd)	1124	S/MH(C0/180)	1.25
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH(C90/270)	1.33
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	3737.6	η UP,DN(C0-180)	0.0,48.1
NOMINAL FLUX(lm)	3737.63	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,51.9
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	120	η down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

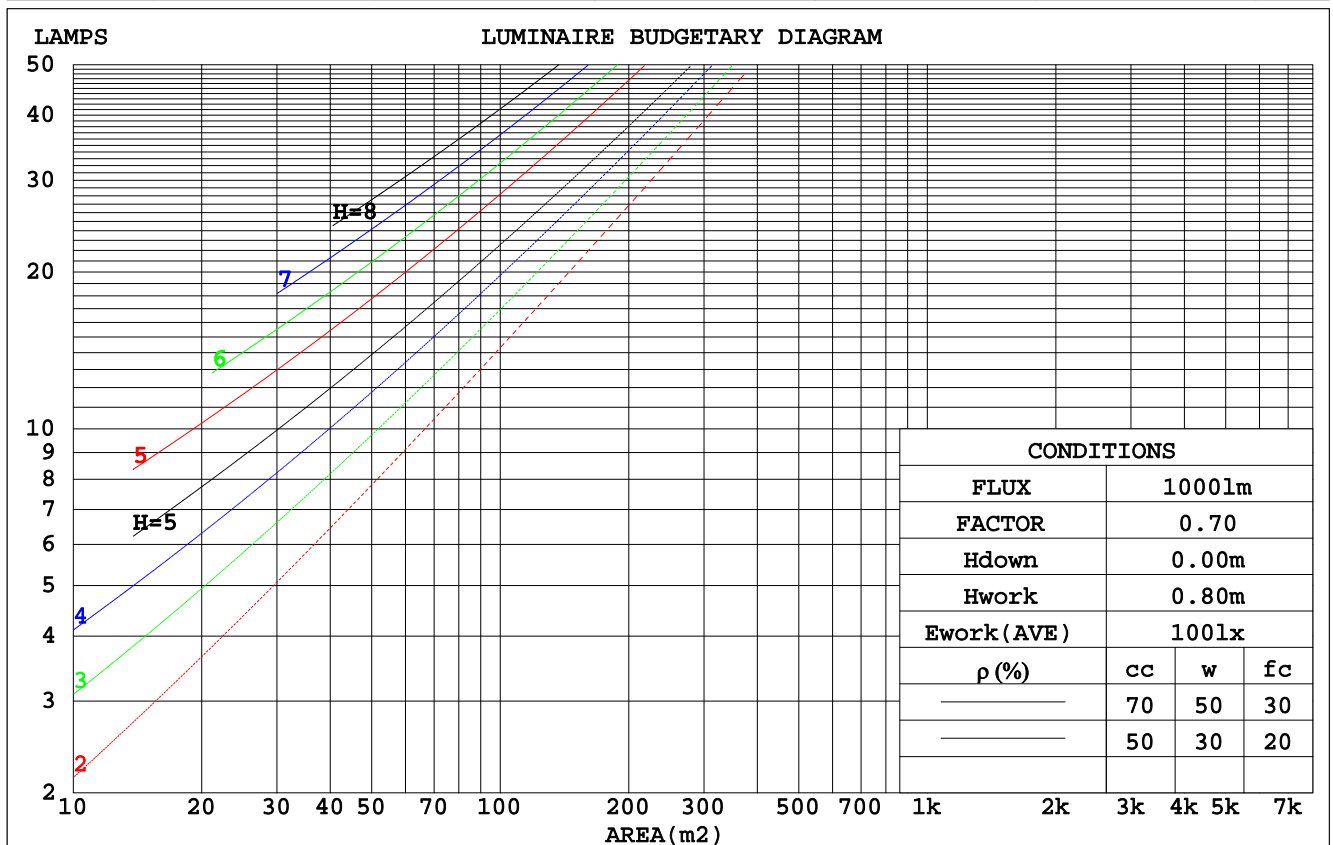
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	$\%lum, lamp$
5	1119	1103	1097	1103	1119	1112	1111	1112	0- 5	26.64	26.64	0.71,0.71
10	1103	1076	1071	1076	1103	1095	1097	1095	5- 10	78.54	105.2	2.81,2.81
15	1077	1045	1044	1045	1077	1072	1083	1072	10- 15	127.5	232.7	6.23,6.23
20	1042	1009	1017	1009	1042	1045	1070	1045	15- 20	172.6	405.3	10.8,10.8
25	996.9	969.6	990.2	969.4	997.2	1014	1056	1014	20- 25	212.9	618.1	16.5,16.5
30	943.6	926.8	938.6	926.4	943.8	979.2	1009	979.9	25- 30	246.8	864.9	23.1,23.1
35	882.4	875.5	887.0	874.8	882.6	933.4	961.9	934.4	30- 35	272.3	1137	30.4,30.4
40	813.4	809.5	835.3	809.2	813.6	869.0	914.9	869.8	35- 40	289.5	1427	38.2,38.2
45	738.0	742.4	783.7	742.3	738.3	803.2	867.9	804.2	40- 45	298.6	1725	46.2,46.2
50	656.1	675.4	732.0	675.4	656.6	737.1	820.9	738.4	45- 50	300.0	2025	54.2,54.2
55	569.4	608.9	676.1	609.5	569.6	671.7	761.2	673.0	50- 55	293.6	2319	62,62
60	477.5	543.3	620.1	544.2	477.8	606.5	701.4	607.8	55- 60	279.7	2599	69.5,69.5
65	382.3	476.8	564.2	477.5	382.2	534.3	641.7	536.2	60- 65	259.4	2858	76.5,76.5
70	284.6	412.8	508.2	413.5	284.5	465.2	581.9	467.5	65- 70	234.0	3092	82.7,82.7
75	188.4	351.7	452.2	352.3	188.2	399.2	522.2	402.0	70- 75	205.1	3297	88.2,88.2
80	99.44	294.5	404.5	295.0	98.95	337.4	469.6	340.7	75- 80	174.8	3472	92.9,92.9
85	29.49	246.0	356.7	247.1	29.09	284.5	416.9	287.6	80- 85	145.9	3618	96.8,96.8
90	0.6907	200.0	308.9	201.6	0.5687	234.6	364.3	237.3	85- 90	119.9	3738	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:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	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	1.00
1.0	1.00	.95	.90	.98	.93	.88	.93	.89	.86	.89	.86	.83	.86	.83	.80	.78
2.0	.86	.78	.71	.84	.77	.70	.80	.74	.69	.77	.72	.67	.74	.69	.66	.63
3.0	.75	.66	.58	.73	.65	.58	.70	.63	.57	.67	.61	.56	.64	.59	.55	.52
4.0	.66	.56	.49	.64	.55	.48	.62	.54	.48	.59	.53	.47	.57	.51	.46	.44
5.0	.59	.49	.42	.57	.48	.41	.55	.47	.41	.53	.46	.40	.51	.45	.40	.38
6.0	.53	.43	.36	.52	.43	.36	.50	.42	.36	.48	.41	.35	.46	.40	.35	.33
7.0	.48	.38	.32	.47	.38	.32	.45	.37	.31	.44	.36	.31	.42	.36	.31	.29
8.0	.43	.34	.28	.43	.34	.28	.41	.33	.28	.40	.33	.28	.39	.32	.28	.26
9.0	.40	.31	.25	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.29	.25	.23
10.0	.37	.28	.23	.36	.28	.23	.35	.28	.23	.34	.27	.23	.33	.27	.23	.21



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

WEC AND CCEC

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.383	.218	.069	.376	.214	.068	.362	.208	.066	.349	.202	.065	.338	.196	.063	
2.0	.336	.184	.056	.329	.181	.056	.317	.176	.055	.306	.172	.054	.296	.167	.053	
3.0	.300	.160	.048	.294	.158	.047	.283	.154	.047	.274	.150	.046	.264	.146	.045	
4.0	.271	.141	.041	.266	.139	.041	.256	.136	.041	.247	.133	.040	.239	.130	.040	
5.0	.247	.126	.036	.242	.124	.036	.234	.122	.036	.226	.119	.035	.219	.117	.035	
6.0	.226	.113	.032	.222	.112	.032	.215	.110	.032	.208	.108	.032	.201	.106	.031	
7.0	.209	.103	.029	.205	.102	.029	.199	.100	.029	.192	.099	.029	.187	.097	.028	
8.0	.194	.095	.027	.191	.094	.027	.185	.092	.026	.179	.091	.026	.174	.089	.026	
9.0	.181	.087	.024	.178	.087	.024	.173	.085	.024	.168	.084	.024	.163	.083	.024	
10.0	.169	.081	.023	.167	.081	.022	.162	.079	.022	.157	.078	.022	.153	.077	.022	

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	.185	.155	.129	.159	.133	.111	.108	.092	.077	.062	.053	.045	.020	.017	.014	
2.0	.178	.132	.093	.153	.113	.080	.105	.078	.056	.060	.046	.033	.019	.015	.011	
3.0	.170	.114	.070	.146	.099	.061	.100	.069	.043	.058	.040	.025	.019	.013	.008	
4.0	.162	.101	.055	.139	.088	.048	.096	.061	.034	.055	.036	.020	.018	.012	.007	
5.0	.154	.091	.045	.132	.079	.039	.091	.055	.027	.053	.032	.016	.017	.011	.005	
6.0	.147	.083	.037	.126	.072	.032	.087	.050	.023	.050	.030	.014	.016	.010	.005	
7.0	.139	.076	.032	.120	.066	.028	.083	.046	.020	.048	.027	.012	.016	.009	.004	
8.0	.132	.070	.028	.114	.061	.024	.079	.043	.017	.046	.025	.010	.015	.008	.003	
9.0	.126	.065	.024	.108	.057	.021	.075	.040	.015	.044	.024	.009	.014	.008	.003	
10.0	.120	.061	.022	.103	.053	.019	.072	.037	.014	.042	.022	.008	.014	.007	.003	

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

UGR(Unified Glare Rating) Table

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	21.8	23.4	22.1	23.6	23.8	23.0	24.6	23.3	24.9	25.1
3H	23.2	24.7	23.5	25.0	25.2	25.4	26.9	25.7	27.2	27.4
4H	23.8	25.2	24.1	25.5	25.7	26.7	28.2	27.1	28.4	28.7
6H	24.1	25.5	24.4	25.7	26.0	28.2	29.6	28.5	29.8	30.1
8H	24.2	25.5	24.5	25.8	26.1	29.0	30.3	29.3	30.6	30.9
12H	24.2	25.5	24.5	25.8	26.1	29.9	31.2	30.3	31.5	31.8
4H 2H	22.7	24.1	23.0	24.4	24.7	23.6	25.1	24.0	25.3	25.6
3H	24.4	25.7	24.8	26.0	26.3	26.3	27.6	26.7	27.9	28.2
4H	25.1	26.3	25.5	26.6	27.0	27.8	29.0	28.2	29.3	29.6
6H	25.6	26.7	26.0	27.1	27.4	29.5	30.5	29.9	30.9	31.3
8H	25.8	26.8	26.2	27.1	27.5	30.4	31.4	30.8	31.8	32.2
12H	25.8	26.8	26.3	27.2	27.6	31.5	32.4	31.9	32.8	33.2
8H 4H	26.0	27.0	26.4	27.3	27.7	28.2	29.2	28.6	29.5	29.9
6H	26.8	27.7	27.3	28.1	28.5	30.1	31.0	30.6	31.4	31.8
8H	27.2	27.9	27.6	28.4	28.8	31.3	32.0	31.7	32.5	32.9
12H	27.4	28.1	27.9	28.5	29.0	32.6	33.3	33.1	33.7	34.2
12H 4H	26.2	27.2	26.7	27.6	28.0	28.2	29.1	28.6	29.5	29.9
6H	27.3	28.1	27.8	28.5	28.9	30.3	31.0	30.7	31.4	31.9
8H	27.8	28.5	28.3	28.9	29.4	31.5	32.2	32.0	32.6	33.1
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.1				
1.5H	+ 0.1 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.4				

CIE Pub.117 Corrected 3738 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.6)

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity:65.0%
 Test Distance:8.800m [K=1.0000]
 Remarks:

UTILIZATION FACTORS TABLE

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	54	42	35	53	42	35	52	41	34	28
0.80	64	51	43	63	51	43	61	50	43	35
1.00	72	60	52	70	59	51	68	61	51	43
1.25	79	67	59	77	66	59	74	65	58	50
1.50	84	73	65	82	72	64	79	70	63	55
2.00	91	81	73	89	80	73	85	77	71	63
2.50	95	86	79	93	85	78	89	82	76	67
3.00	99	90	84	96	89	83	92	86	81	71
4.00	103	96	90	101	94	89	96	91	86	77
5.00	106	100	95	103	98	93	98	94	90	80
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: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Conical surface Flux(90deg):

1725.3 lm

%lum = 46.2%

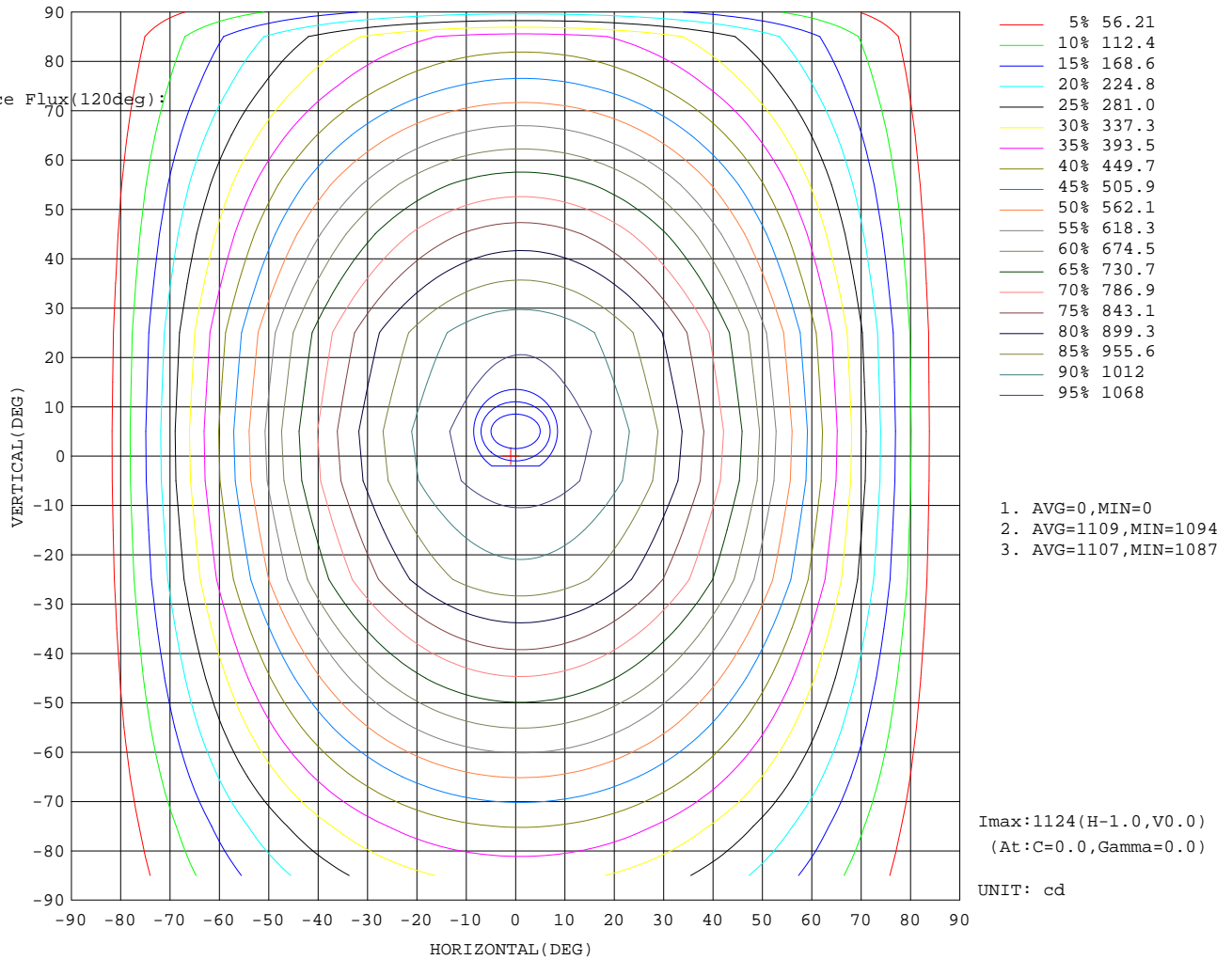
%lamp = 46.2%

Conical surface Flux(120deg):

2598.5 lm

%lum = 69.5%

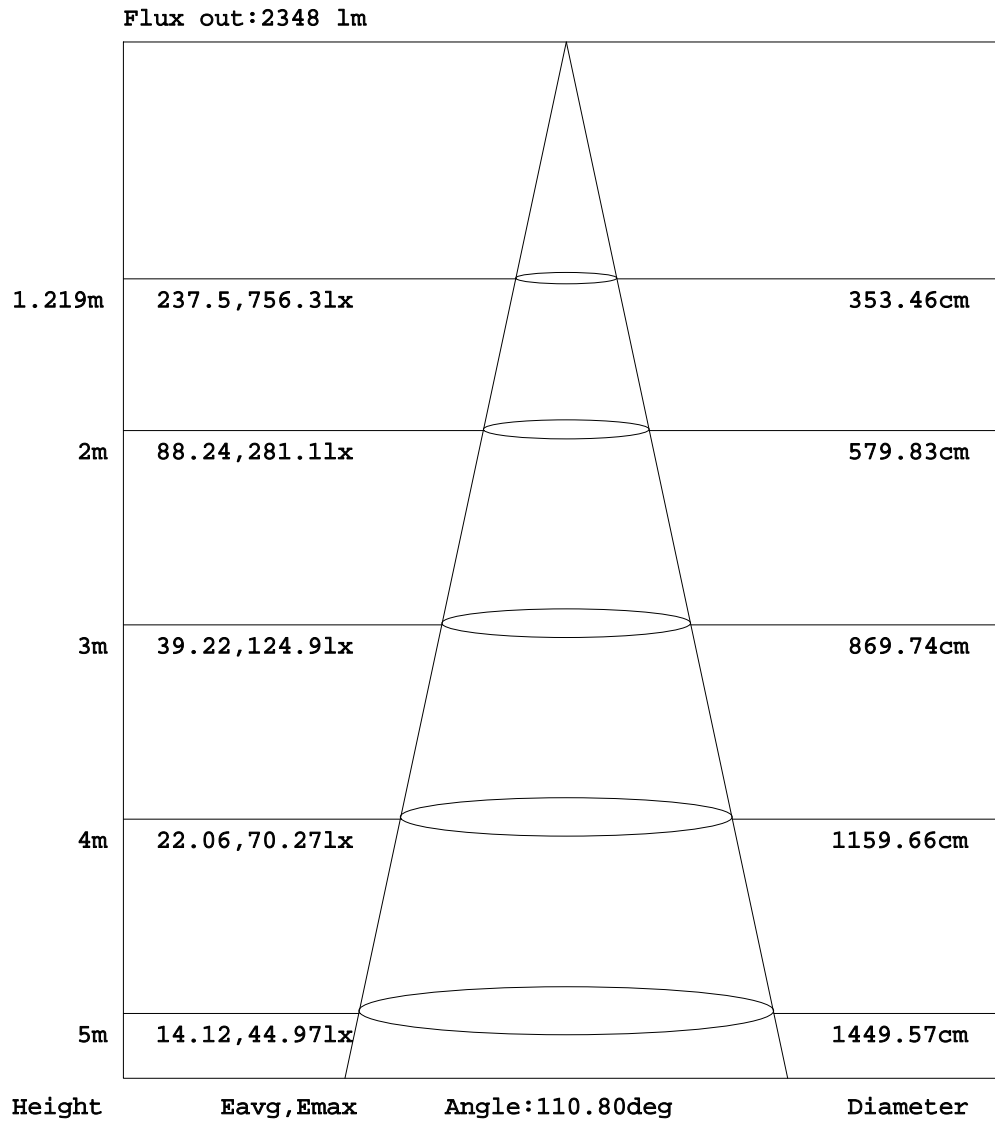
%lamp = 69.5%



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

AAI Figure

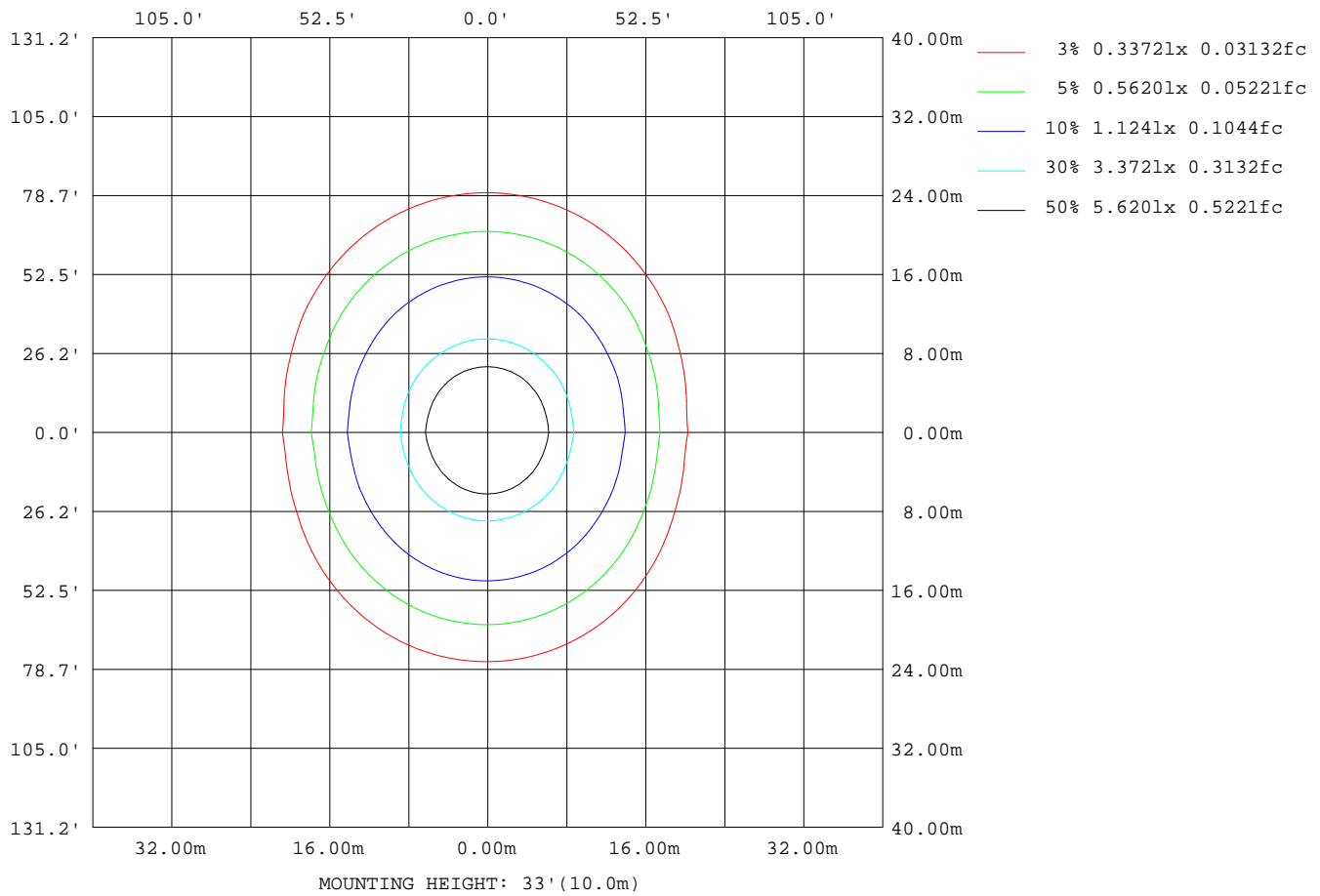


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
 Humidity: 65.0%
 Test Distance: 8.800m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity: 65.0%
Test Distance: 8.800m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:120.4V I:0.2427A P:29.08W PF:0.9950 Lamp Flux:3737.63x1 lm		
NAME: MRS4-30/D10/U/40	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

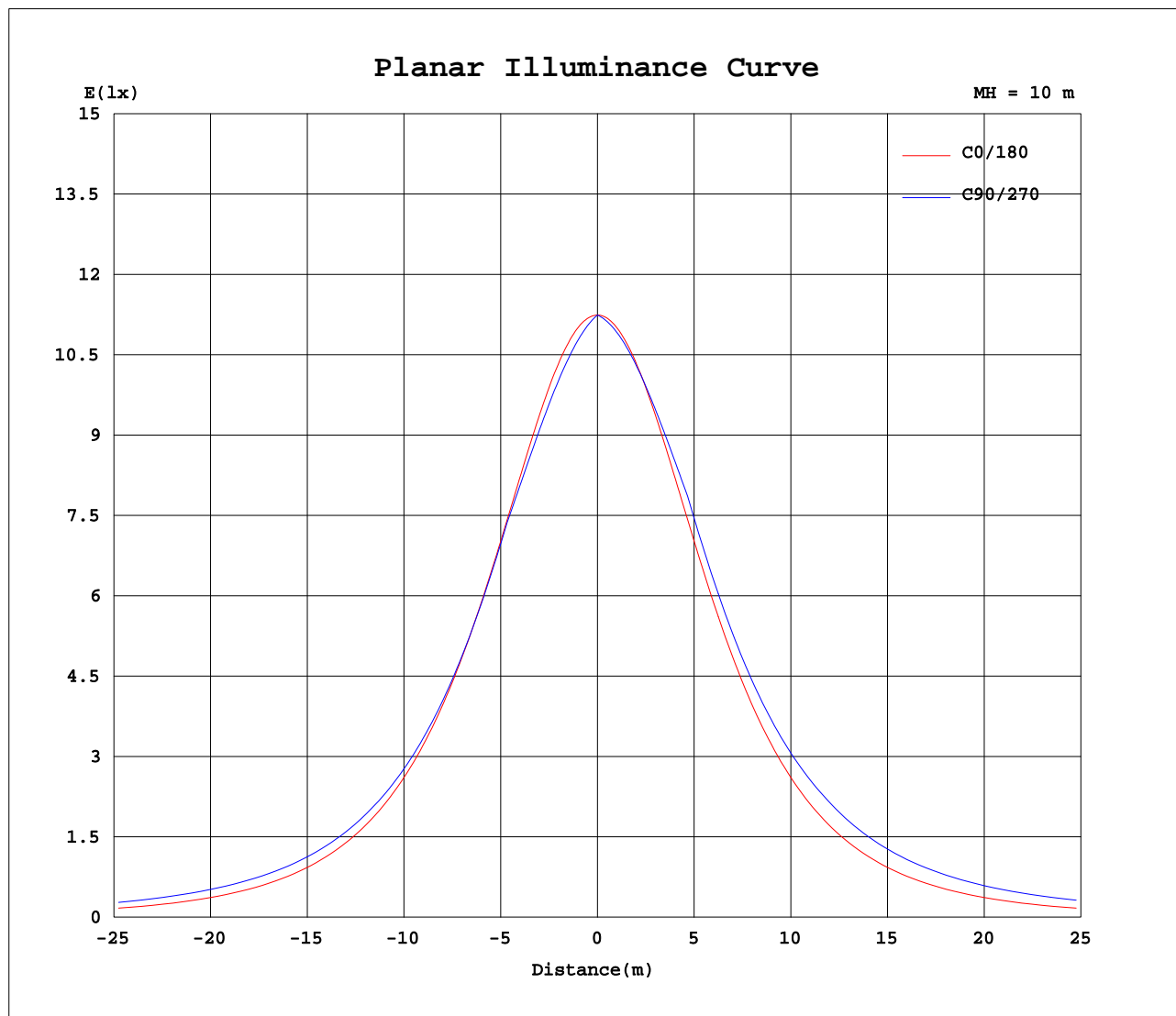
AvgL	cd/m2
L_0~180(65)av	14270
L_0~180(75)av	11476
L_0~180(85)av	5302
L_90~270(65)av	22506
L_90~270(75)av	29697
L_90~270(85)av	70015
L_45(65)av	18896
L_45(75)av	22936
L_45(85)av	48205

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2021-04-29

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [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: 2021-04-29

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity: 65.0%
Test Distance: 8.800m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-04-29

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: cd

[illegible]

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--3

UNIT: cd

[illegible]

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2021-04-29

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```

LUMINOUS DISTRIBUTION INTENSITY DATA

UNIT: cd

[illegible]

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.290
Humidity:65.0%
Test Distance:8.800m [K=1.0000]
Remarks:

```