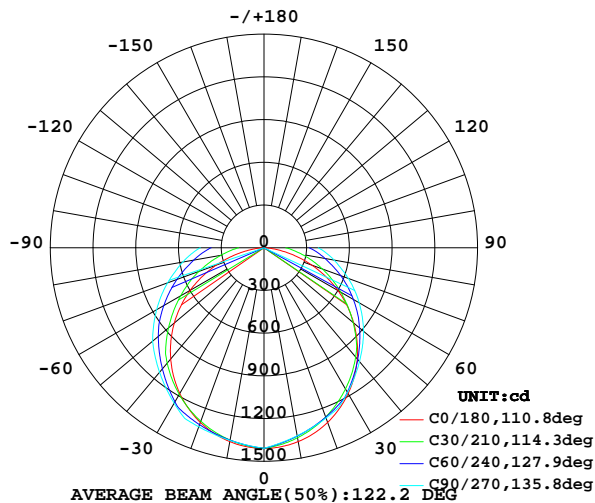


LUMINAIRE PHOTOMETRIC TEST REPORT

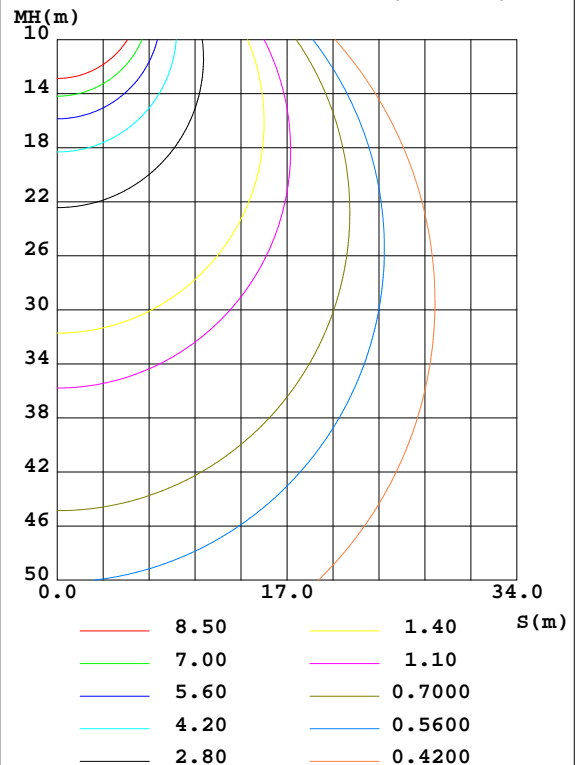
Test:U:120.4V I:0.3384A P:40.63W PF:0.9972 Lamp Flux:4662.12x1 lm		
NAME: MSS4-20/30/40/347/D10/W/35-40-50	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 114.75 lm/W			
MODEL	3500K	I _{max} (cd)	1409	S/MH(C0/180)	1.25
NOMINAL POWER(W)	40	LOR(%)	100.0	S/MH(C90/270)	1.33
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	4662.1	η UP,DN(C0-180)	0.0,48.1
NOMINAL FLUX(lm)	4662.12	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:

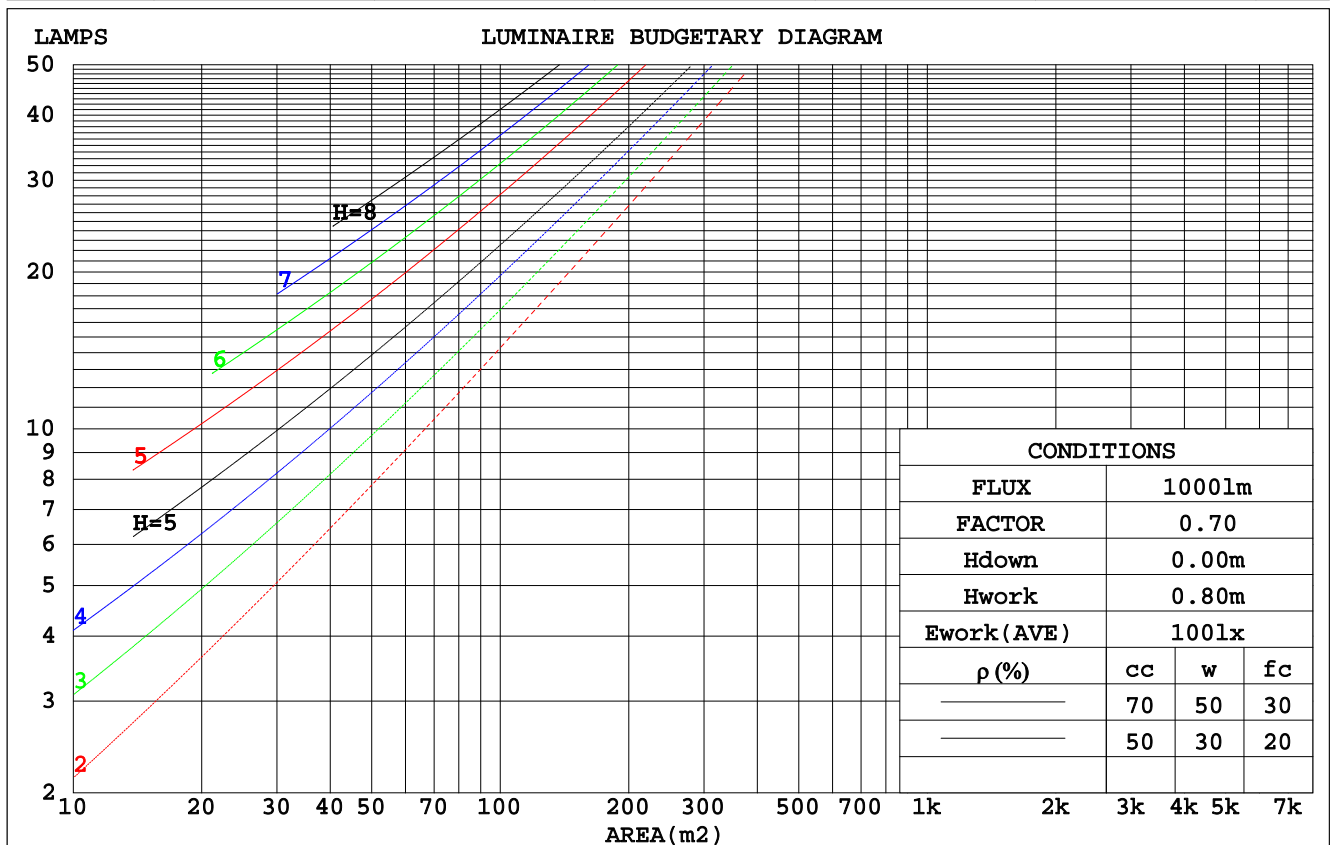
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
5	1402	1382	1375	1382	1402	1393	1391	1393	0- 5	33.38	33.38	0.72,0.72
10	1383	1348	1341	1348	1383	1371	1374	1371	5- 10	98.39	131.8	2.83,2.83
15	1350	1308	1307	1308	1350	1342	1356	1343	10- 15	159.7	291.5	6.25,6.25
20	1306	1263	1273	1263	1306	1308	1339	1309	15- 20	216.1	507.6	10.9,10.9
25	1249	1213	1239	1213	1249	1269	1321	1270	20- 25	266.5	774.1	16.6,16.6
30	1183	1159	1174	1159	1183	1225	1261	1227	25- 30	308.9	1083	23.2,23.2
35	1106	1095	1109	1095	1105	1167	1201	1170	30- 35	340.7	1424	30.5,30.5
40	1019	1012	1044	1012	1019	1085	1141	1088	35- 40	362.0	1786	38.3,38.3
45	924.8	927.1	978.4	928.3	924.8	1002	1081	1006	40- 45	373.2	2159	46.3,46.3
50	822.4	842.6	913.2	844.4	822.3	918.3	1021	922.7	45- 50	374.6	2534	54.3,54.3
55	713.6	758.6	842.5	761.4	713.2	835.4	946.0	840.6	50- 55	366.4	2900	62.2,62.2
60	598.5	676.0	771.7	679.6	598.1	752.8	870.7	758.4	55- 60	348.7	3249	69.7,69.7
65	479.5	592.0	701.0	595.9	478.6	662.1	795.5	668.9	60- 65	323.1	3572	76.6,76.6
70	357.4	511.4	630.3	515.3	356.6	575.1	720.3	582.9	65- 70	291.1	3863	82.9,82.9
75	236.8	434.2	559.5	438.4	235.7	492.0	645.1	500.8	70- 75	254.6	4118	88.3,88.3
80	125.3	362.1	500.1	366.5	123.9	414.4	579.3	423.9	75- 80	216.5	4334	93,93
85	37.48	301.8	440.6	306.8	36.57	348.3	513.6	357.4	80- 85	180.4	4514	96.8,96.8
90	0.8865	244.6	381.1	250.2	0.7220	285.8	447.9	294.3	85- 90	147.8	4662	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	.89	.93	.89	.86	.89	.86	.83	.86	.83	.80	.78
2.0	.86	.78	.71	.84	.77	.71	.80	.74	.69	.77	.72	.67	.74	.69	.66	.63
3.0	.75	.66	.58	.73	.65	.58	.70	.63	.57	.67	.61	.56	.65	.59	.55	.52
4.0	.66	.56	.49	.64	.55	.49	.62	.54	.48	.59	.53	.47	.57	.51	.46	.44
5.0	.59	.49	.42	.57	.48	.42	.55	.47	.41	.53	.46	.41	.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	.37	.31	.42	.36	.31	.29
8.0	.43	.34	.28	.43	.34	.28	.41	.34	.28	.40	.33	.28	.39	.32	.28	.26
9.0	.40	.31	.25	.39	.31	.25	.38	.30	.25	.37	.30	.25	.36	.30	.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	.382	.217	.069	.374	.214	.068	.361	.207	.066	.348	.201	.064	.337	.195	.063	
2.0	.335	.184	.056	.328	.181	.056	.316	.176	.055	.305	.171	.054	.295	.167	.053	
3.0	.299	.159	.048	.294	.157	.047	.283	.153	.047	.273	.150	.046	.264	.146	.045	
4.0	.270	.141	.041	.265	.139	.041	.256	.136	.041	.247	.133	.040	.239	.130	.040	
5.0	.246	.126	.036	.242	.124	.036	.233	.122	.036	.226	.119	.035	.218	.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	.186	.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	

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						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	.152	.113	.080	.104	.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	.028	.053	.032	.016	.017	.011	.005	
6.0	.146	.083	.037	.126	.072	.033	.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	22.6	24.2	22.8	24.4	24.6	23.8	25.4	24.1	25.6	25.8
3H	24.0	25.5	24.3	25.8	26.0	26.2	27.7	26.5	27.9	28.2
4H	24.5	26.0	24.9	26.2	26.5	27.5	28.9	27.8	29.2	29.4
6H	24.9	26.2	25.2	26.5	26.8	28.9	30.3	29.2	30.6	30.8
8H	24.9	26.3	25.3	26.5	26.8	29.7	31.0	30.0	31.3	31.6
12H	24.9	26.2	25.3	26.5	26.8	30.6	31.9	31.0	32.2	32.5
4H 2H	23.5	24.9	23.8	25.2	25.4	24.4	25.8	24.7	26.1	26.4
3H	25.2	26.5	25.5	26.8	27.1	27.0	28.3	27.4	28.6	28.9
4H	25.9	27.1	26.3	27.4	27.7	28.5	29.7	28.9	30.0	30.4
6H	26.4	27.4	26.8	27.8	28.2	30.2	31.2	30.6	31.6	32.0
8H	26.5	27.5	26.9	27.9	28.3	31.1	32.1	31.5	32.5	32.9
12H	26.6	27.5	27.0	27.9	28.3	32.2	33.1	32.6	33.5	33.9
8H 4H	26.7	27.7	27.1	28.1	28.5	28.9	29.9	29.3	30.3	30.6
6H	27.6	28.4	28.0	28.8	29.3	30.8	31.7	31.3	32.1	32.5
8H	27.9	28.6	28.3	29.1	29.5	32.0	32.7	32.4	33.2	33.6
12H	28.1	28.8	28.6	29.2	29.7	33.3	34.0	33.8	34.4	34.9
12H 4H	27.0	27.9	27.4	28.3	28.7	28.9	29.8	29.3	30.2	30.6
6H	28.0	28.8	28.5	29.2	29.7	31.0	31.7	31.4	32.2	32.6
8H	28.5	29.2	29.0	29.6	30.1	32.2	32.9	32.7	33.3	33.8
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 4662 lm Total Lamp Luminous Flux.(8log(F/F0) = 5.3)

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	36
1.00	72	60	52	71	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	74	89	80	73	85	77	71	63
2.50	95	86	79	93	85	78	89	82	76	67
3.00	99	91	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):

2159 lm

%lum = 46.3%

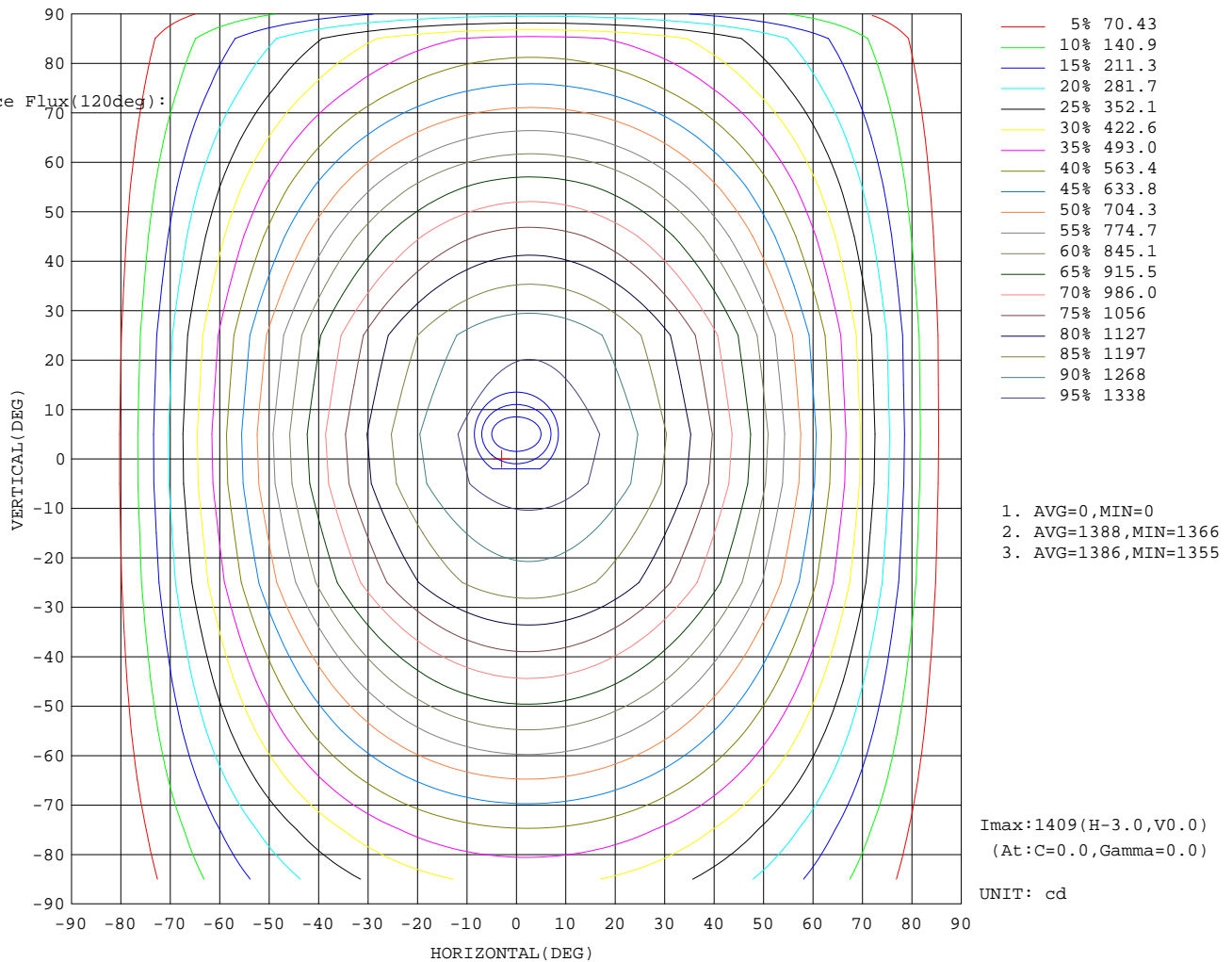
%lamp = 46.3%

Conical surface Flux(120deg):

3248.8 lm

%lum = 69.7%

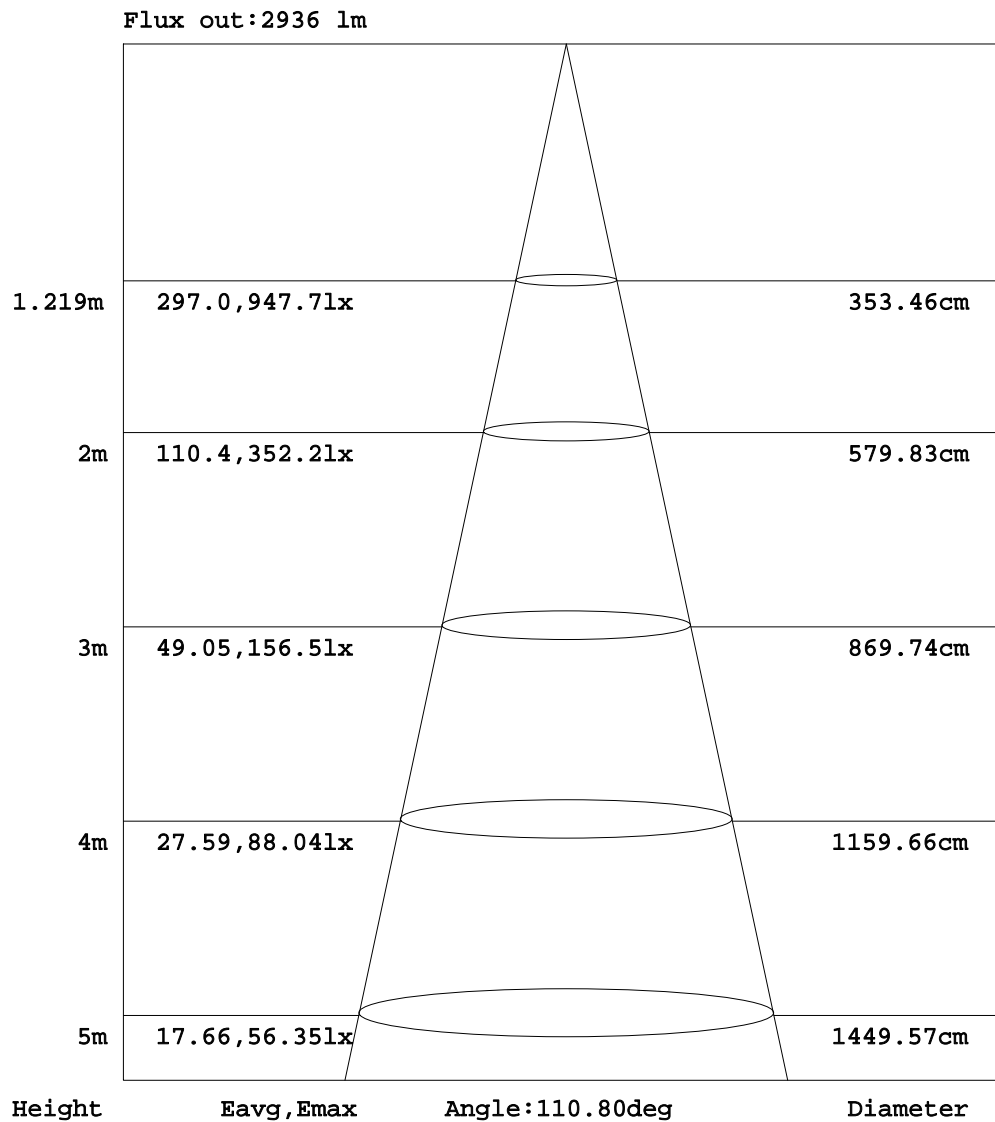
%lamp = 69.7%



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

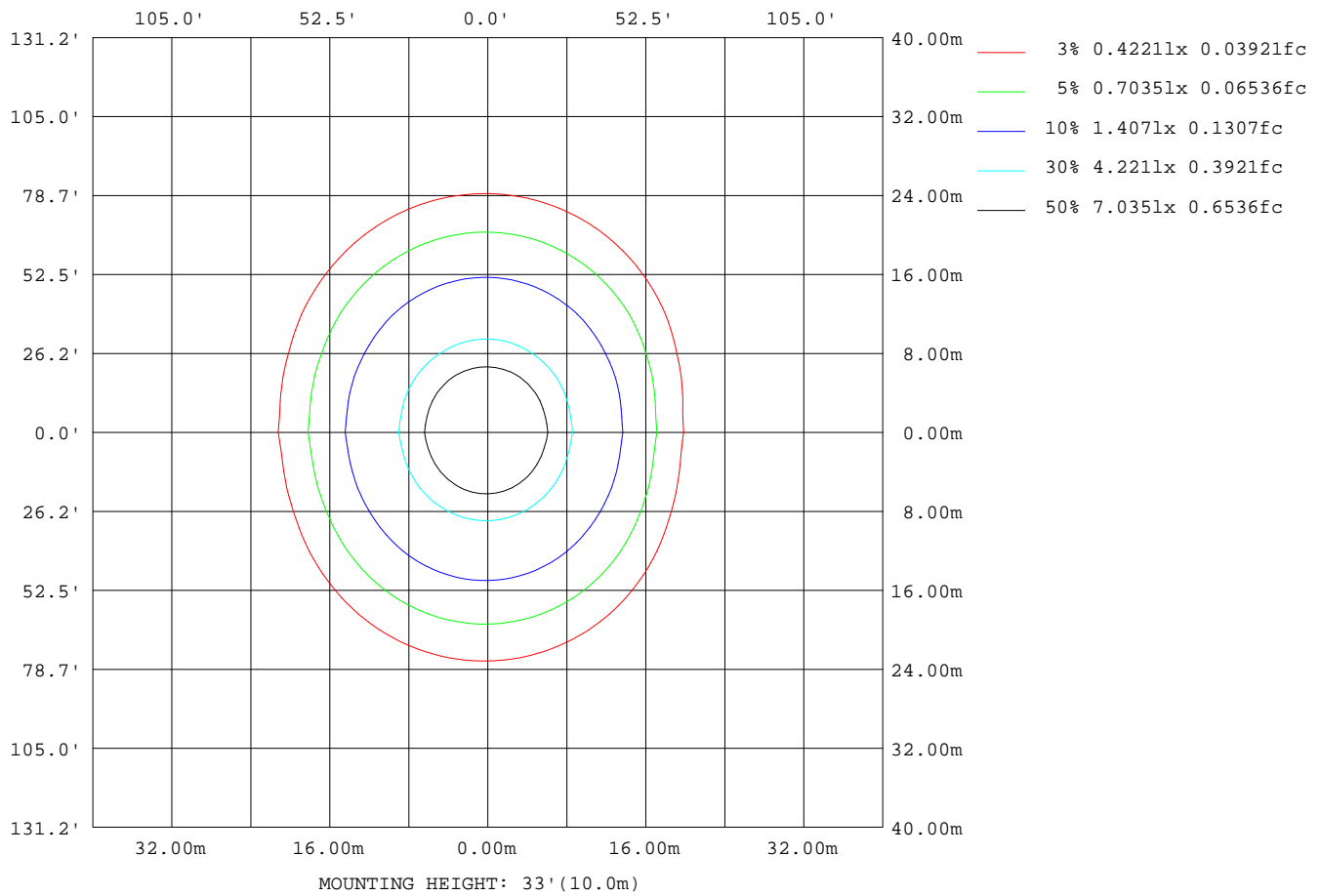


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

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:0.3384A P:40.63W PF:0.9972 Lamp Flux:4662.12x1 lm		
NAME: MRS4-40/D10/U/35	TYPE:LED	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: EVERFINE	SUR.:	PROTECTION ANGLE:

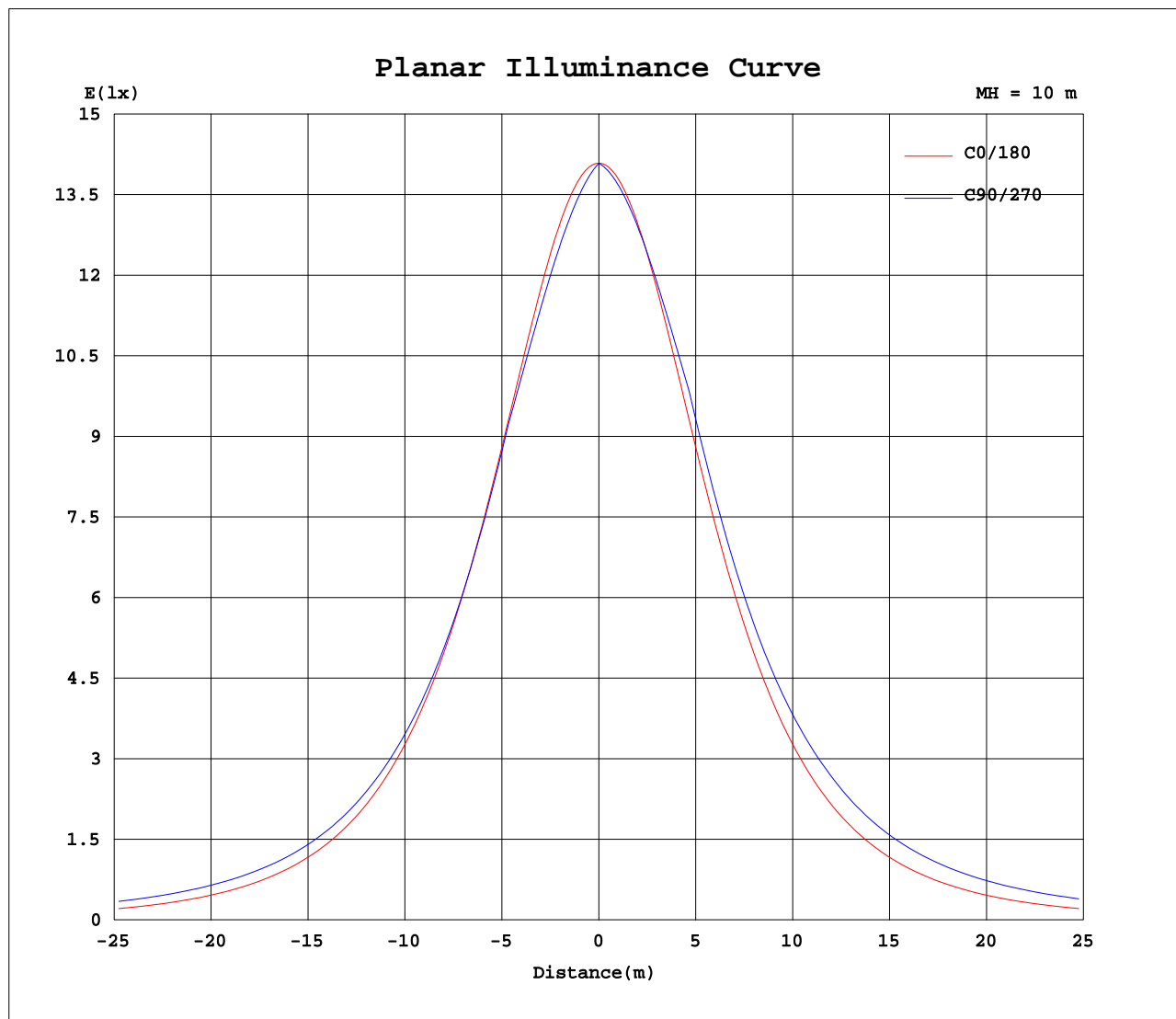
AvgL	cd/m2
L_0~180(65)av	17882
L_0~180(75)av	14400
L_0~180(85)av	6702
L_90~270(65)av	27932
L_90~270(75)av	36712
L_90~270(85)av	86357
L_45(65)av	23507
L_45(75)av	28427
L_45(85)av	59480

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

UNIT: cd

[illegible]

```

Range: 0 - 90DEG
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]

```

Range: 0 - 90DEG
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]

```

Range: 0 - 90DEG
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]

```

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

```