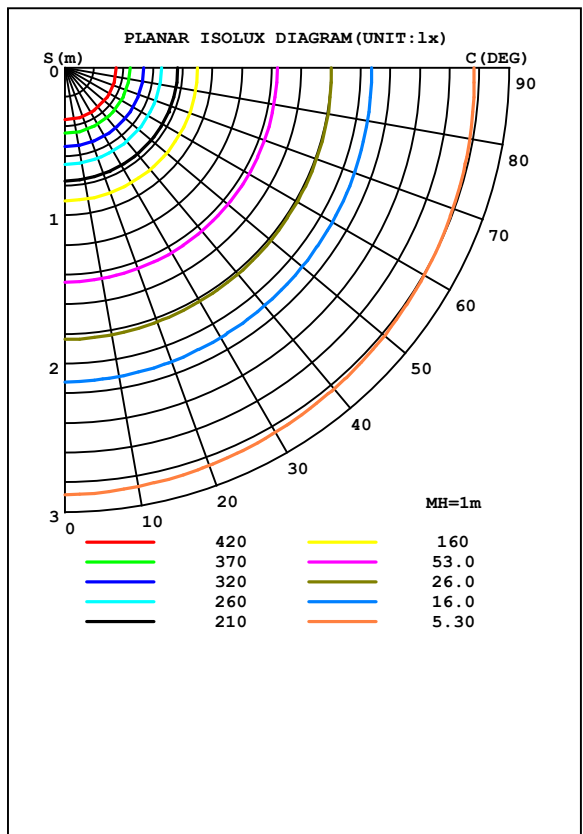
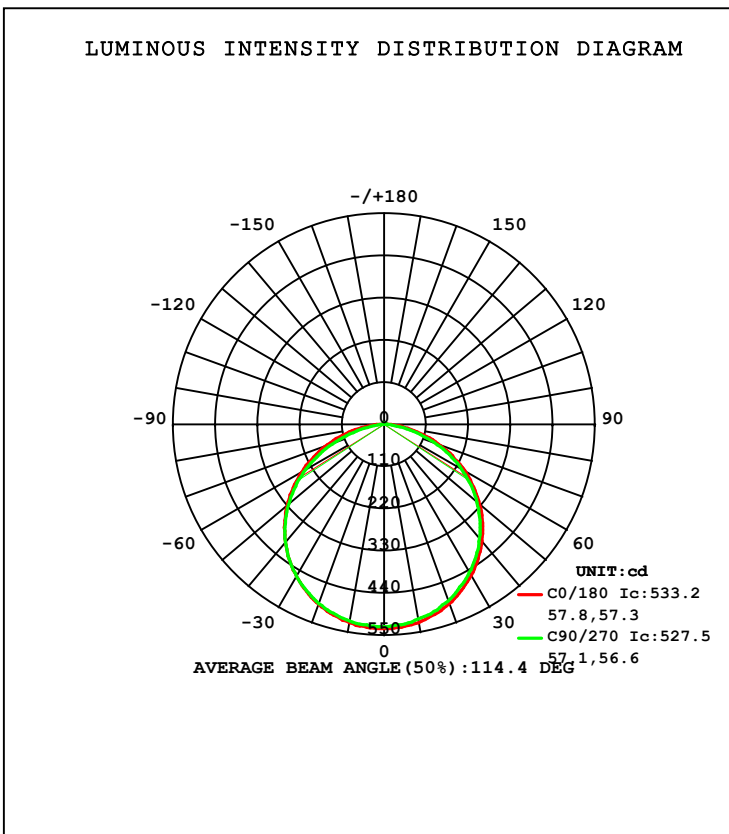


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:230.21V I:0.0867A P:19.421W PF:0.9726 Freq:49.99Hz Lamp Flux:1547.94x1 lm		
NAME: DL8G 20W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL	DL8G	I _{max} (cd)	533.2	S/MH (C0/180)	1.27
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	1.26
RATED VOLTAGE (V)	230	TOTAL FLUX (lm)	1547.9	η UP, DN (C0-180)	0.6, 49.8
NOMINAL FLUX (lm)	1547.94	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.5, 49.1
LAMPS INSIDE	1	η up (%)	1.1	CIBSE SHR NOM	1.25
TEST VOLTAGE (V)	230	η down (%)	98.9	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

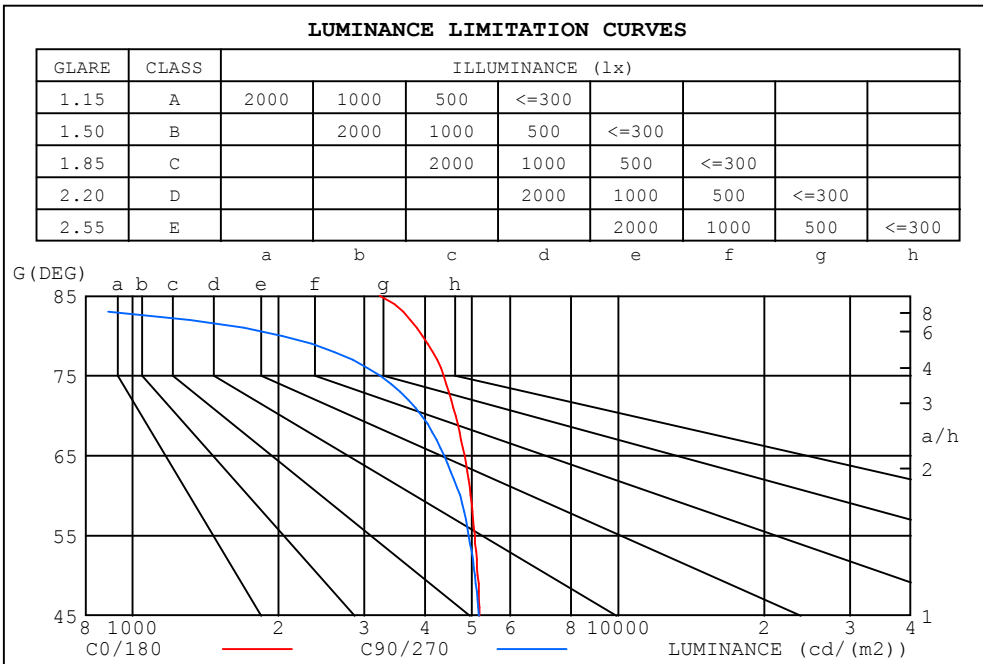
ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	525.2	520.4	524.7	516.0					0- 10	50.18	50.18	3.24,3.24
20	499.7	497.2	498.0	489.6					10- 20	144.2	194.4	12.6,12.6
30	457.6	457.5	455.1	445.7					20- 30	219.8	414.1	26.8,26.8
40	400.6	400.7	398.1	388.0					30- 40	267.3	681.5	44,44
50	330.4	325.7	326.2	316.4					40- 50	279.4	960.9	62.1,62.1
60	247.9	236.3	243.3	234.2					50- 60	253.5	1214	78.5,78.5
70	158.5	134.8	151.5	139.0					60- 70	191.4	1406	90.8,90.8
80	68.72	35.35	63.40	43.48					70- 80	103.9	1510	97.5,97.5
90	0.8703	1.206	0.6048	1.674					80- 90	21.35	1531	98.9,98.9
100	1.520	1.557	1.090	2.338					90-100	1.407	1533	99,99
110	2.247	2.065	1.692	1.670					100-110	1.734	1534	99.1,99.1
120	2.932	2.785	2.326	2.440					110-120	2.263	1537	99.3,99.3
130	3.510	3.366	2.934	3.083					120-130	2.619	1539	99.4,99.4
140	3.931	3.874	3.469	3.329					130-140	2.669	1542	99.6,99.6
150	4.296	4.201	3.958	3.918					140-150	2.425	1544	99.8,99.8
160	4.547	4.509	4.347	4.238					150-160	1.963	1546	99.9,99.9
170	4.747	4.763	4.674	4.647					160-170	1.293	1547	100,100
180	4.863	4.836	4.901	4.813					170-180	0.4554	1548	100,100
DEG	LUMINOUS INTENSITY:cd Less than 35% Percent = 13.2 %									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



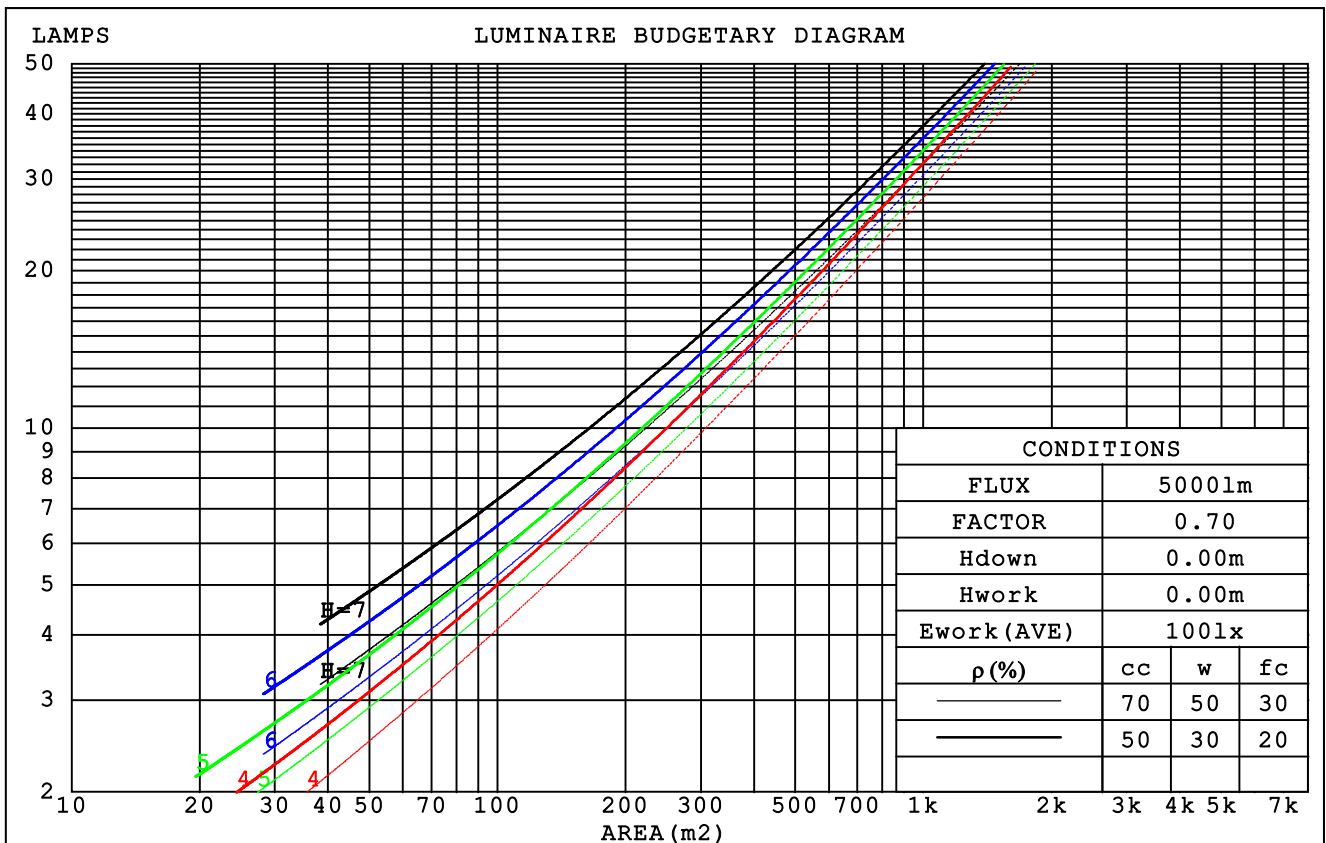
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3226	190
80	3958	2036
75	4367	3236
70	4635	3941
65	4824	4386
60	4957	4725
55	5065	4922
50	5140	5067
45	5188	5163

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

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						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	1.01	1.01	1.01	.99
1.0	1.04	.90	.96	1.02	.98	.94	.97	.94	.91	.93	.90	.88	.89	.87	.85	.83
2.0	.90	.84	.78	.89	.82	.77	.85	.80	.75	.81	.77	.73	.78	.75	.71	.69
3.0	.79	.71	.65	.78	.70	.64	.75	.68	.63	.72	.66	.62	.69	.64	.60	.58
4.0	.70	.61	.55	.69	.61	.54	.66	.59	.53	.64	.58	.53	.61	.56	.52	.49
5.0	.63	.54	.47	.61	.53	.47	.59	.52	.46	.57	.51	.45	.55	.49	.45	.43
6.0	.56	.47	.41	.55	.47	.41	.53	.46	.40	.52	.45	.40	.50	.44	.39	.37
7.0	.51	.42	.36	.50	.42	.36	.49	.41	.36	.47	.40	.35	.46	.39	.35	.33
8.0	.47	.38	.32	.46	.38	.32	.44	.37	.32	.43	.36	.31	.42	.36	.31	.29
9.0	.43	.34	.29	.42	.34	.29	.41	.34	.29	.40	.33	.28	.39	.33	.28	.26
10.0	.39	.31	.26	.39	.31	.26	.38	.31	.26	.37	.30	.26	.36	.30	.26	.24



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [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	.304	.173	.055	.297	.169	.054	.283	.162	.052	.270	.156	.050	.258	.150	.048	
2.0	.289	.158	.049	.282	.155	.048	.270	.150	.047	.259	.145	.045	.248	.140	.044	
3.0	.268	.143	.043	.262	.141	.042	.252	.136	.041	.242	.132	.041	.232	.129	.040	
4.0	.248	.129	.038	.243	.127	.038	.233	.124	.037	.224	.120	.036	.216	.117	.036	
5.0	.230	.117	.034	.225	.116	.034	.216	.113	.033	.208	.110	.033	.201	.107	.032	
6.0	.213	.107	.031	.209	.106	.030	.201	.103	.030	.194	.101	.030	.188	.099	.029	
7.0	.198	.098	.028	.195	.097	.028	.188	.095	.027	.182	.093	.027	.175	.091	.027	
8.0	.185	.091	.025	.182	.090	.025	.176	.088	.025	.170	.086	.025	.165	.085	.025	
9.0	.174	.084	.023	.171	.083	.023	.165	.082	.023	.160	.080	.023	.155	.079	.023	
10.0	.163	.078	.022	.161	.078	.022	.156	.076	.021	.151	.075	.021	.147	.074	.021	

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																
1.0	.188	.165	.143	.161	.141	.123	.110	.097	.085	.063	.056	.050	.020	.018	.016	
2.0	.180	.140	.107	.154	.121	.092	.106	.084	.064	.061	.049	.038	.020	.016	.012	
3.0	.173	.123	.083	.148	.106	.072	.102	.074	.050	.059	.043	.030	.019	.014	.010	
4.0	.165	.109	.067	.142	.095	.058	.097	.066	.041	.056	.039	.024	.018	.013	.008	
5.0	.158	.099	.056	.135	.086	.049	.093	.060	.034	.054	.035	.020	.017	.011	.007	
6.0	.151	.091	.048	.129	.079	.042	.089	.055	.029	.052	.032	.017	.017	.011	.006	
7.0	.144	.084	.042	.124	.073	.036	.085	.051	.026	.050	.030	.015	.016	.010	.005	
8.0	.137	.078	.037	.118	.068	.033	.082	.048	.023	.048	.028	.014	.015	.009	.005	
9.0	.131	.073	.034	.113	.063	.029	.078	.045	.021	.046	.026	.012	.015	.009	.004	
10.0	.126	.069	.031	.108	.060	.027	.075	.042	.019	.044	.025	.011	.014	.008	.004	

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [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	18.6	20.1	18.9	20.3	20.5	18.4	19.9	18.7	20.1	20.4
3H	20.1	21.5	20.4	21.8	22.0	19.8	21.2	20.1	21.4	21.7
4H	20.8	22.1	21.1	22.4	22.6	20.2	21.5	20.5	21.8	22.1
6H	21.2	22.5	21.6	22.8	23.1	20.4	21.6	20.7	21.9	22.2
8H	21.4	22.6	21.7	22.9	23.2	20.4	21.6	20.7	21.9	22.2
12H	21.4	22.6	21.8	22.9	23.2	20.3	21.5	20.7	21.8	22.1
4H 2H	19.1	20.5	19.5	20.7	21.0	19.0	20.3	19.4	20.6	20.9
3H	20.9	22.0	21.3	22.4	22.7	20.6	21.7	20.9	22.0	22.3
4H	21.6	22.7	22.0	23.0	23.4	21.1	22.2	21.5	22.5	22.9
6H	22.2	23.1	22.6	23.5	23.9	21.4	22.3	21.8	22.7	23.1
8H	22.4	23.3	22.8	23.6	24.1	21.4	22.3	21.8	22.6	23.1
12H	22.5	23.3	23.0	23.7	24.1	21.4	22.2	21.8	22.6	23.0
8H 4H	21.8	22.7	22.3	23.1	23.5	21.4	22.2	21.8	22.6	23.0
6H	22.5	23.2	23.0	23.7	24.1	21.7	22.5	22.2	22.9	23.3
8H	22.8	23.4	23.2	23.9	24.3	21.8	22.4	22.3	22.9	23.3
12H	23.0	23.5	23.4	24.0	24.5	21.8	22.3	22.3	22.8	23.3
12H 4H	21.8	22.6	22.3	23.0	23.4	21.4	22.2	21.8	22.6	23.0
6H	22.5	23.2	23.0	23.6	24.1	21.8	22.4	22.3	22.9	23.3
8H	22.8	23.4	23.3	23.8	24.3	21.8	22.4	22.3	22.9	23.4
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117, 1548 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = 1.5)

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [K=1.0000]
 Remarks:

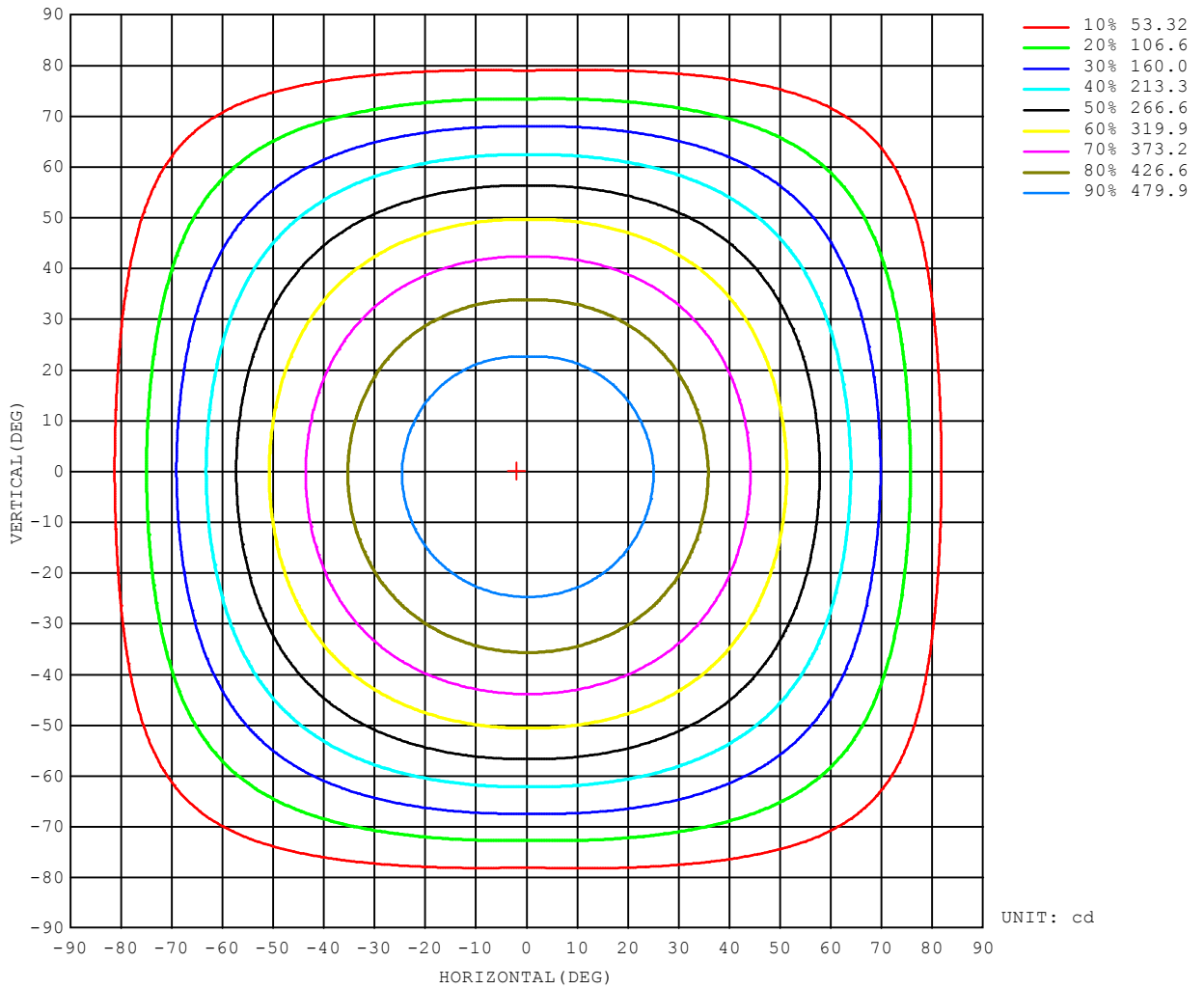
UTILIZATION FACTORS TABLE

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	57	45	38	56	45	38	55	45	38	32
0.80	67	56	48	66	55	48	64	54	48	41
1.00	76	65	57	74	64	57	72	65	56	49
1.25	83	72	65	81	72	65	79	70	64	56
1.50	88	78	71	86	77	70	83	75	69	62
2.00	95	86	80	93	85	79	89	83	77	69
2.50	99	91	85	97	90	84	93	87	82	74
3.00	102	95	90	100	94	89	96	91	86	78
4.00	106	100	96	104	99	94	99	95	92	82
5.00	109	104	100	106	102	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: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

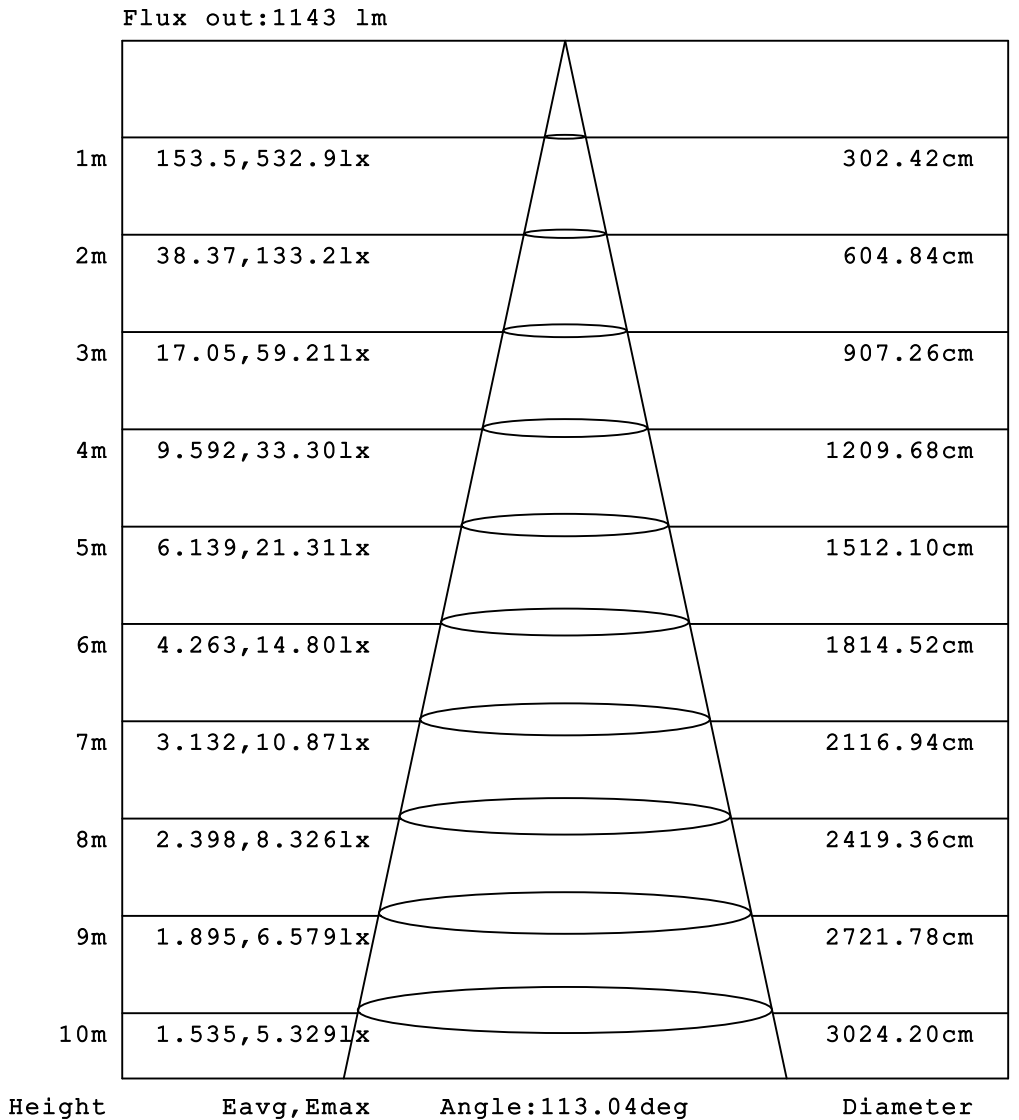
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

AAI Figure

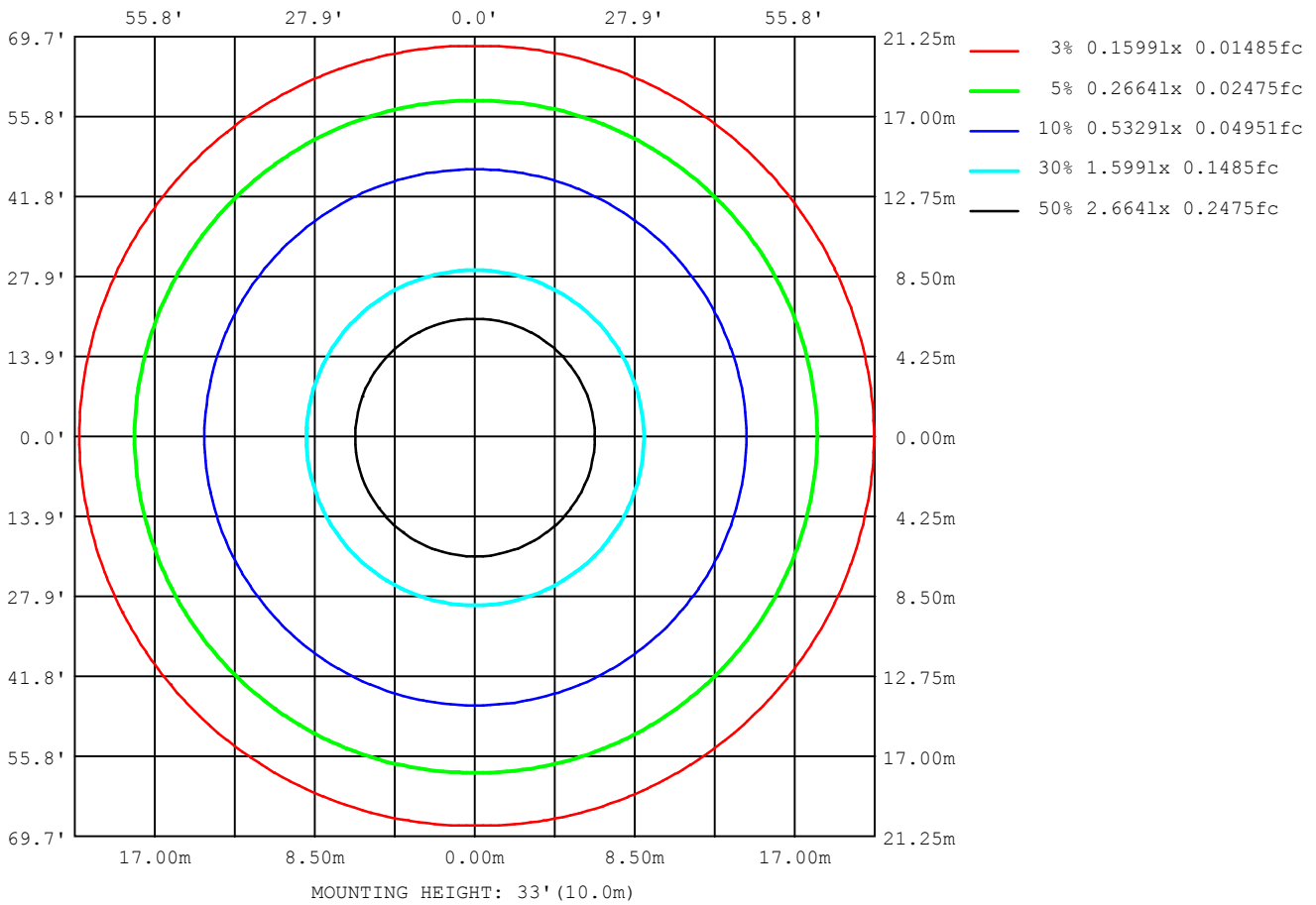


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:230.21V I:0.0867A P:19.421W PF:0.9726 Freq:49.99Hz Lamp Flux:1547.94x1 lm		
NAME: DL8G 20W 6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: SEE	SUR.:	Shielding Angle:

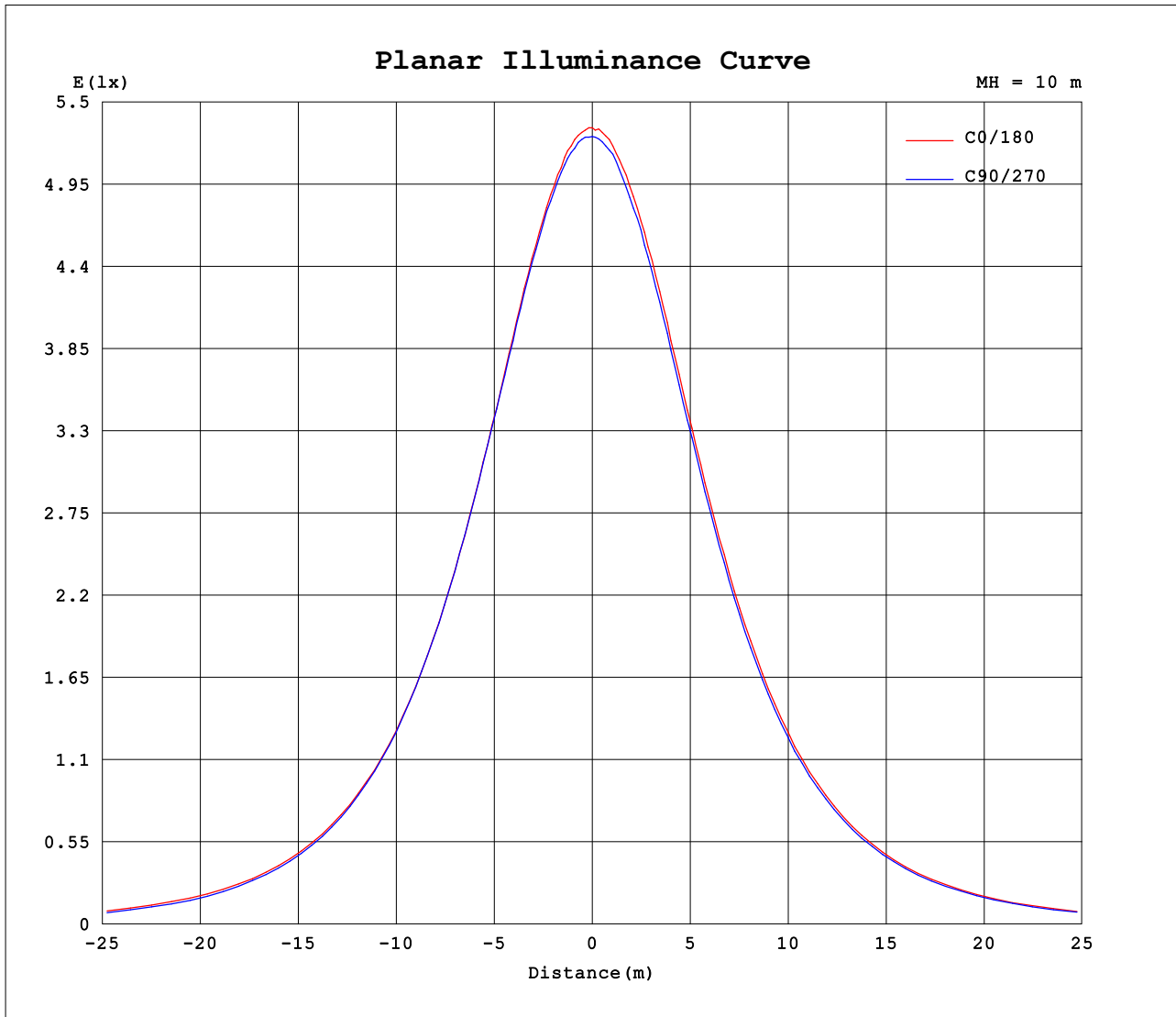
AvgL	cd/m2
L_0~180 (65) av	4744
L_0~180 (75) av	4240
L_0~180 (85) av	3112
L_90~270 (65) av	4412
L_90~270 (75) av	3351
L_90~270 (85) av	460
L_45 (65) av	4532
L_45 (75) av	3676
L_45 (85) av	1447

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:SEE
 Test Date:15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity:60%
 Test Distance:7.630m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: SEE
 Test Date: 15 April 2020

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.366
 Humidity: 60%
 Test Distance: 7.630m [K=1.0000]
 Remarks: