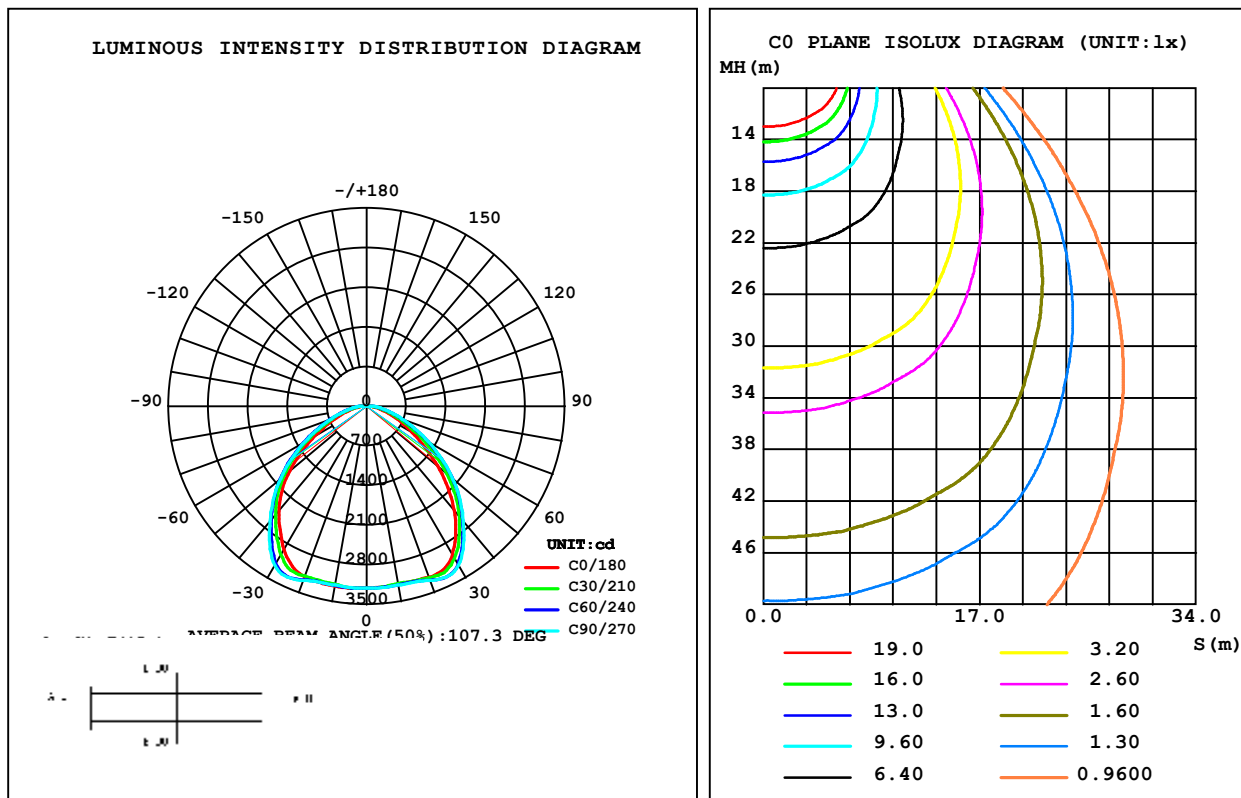


EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

LUMINAIRE PHOTOMETRIC TEST REPORT

NAME: TXD	TYPE:	WEIGHT:
DIMENSION:	SPECIFICATION:	SERIAL No.:
MANUFACTURER: LT	SURFACE:0.036	PROTECTION ANGLE:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 140.98 lm/W			
MODEL	L-L1-1565-50-7	Imax (cd)	3340	S/MH (C0/180)	1.32
NOMINAL POWER (W)	66	LOR (%)	96.8	S/MH (C90/270)	1.42
RATED VOLTAGE (V)	220	TOTAL FLUX (lm)	9191.8	h UP (C0-180)	0.4
NOMINAL FLUX (lm)	9500	CIE CLASS	DIRECT	h DN (C0-180)	48.1
LAMPS INSIDE	1	h up (%)	0.7	h UP (C180-360)	0.4
TEST VOLTAGE (V)	219.2	h down (%)	96.0	h DN (C180-360)	47.9



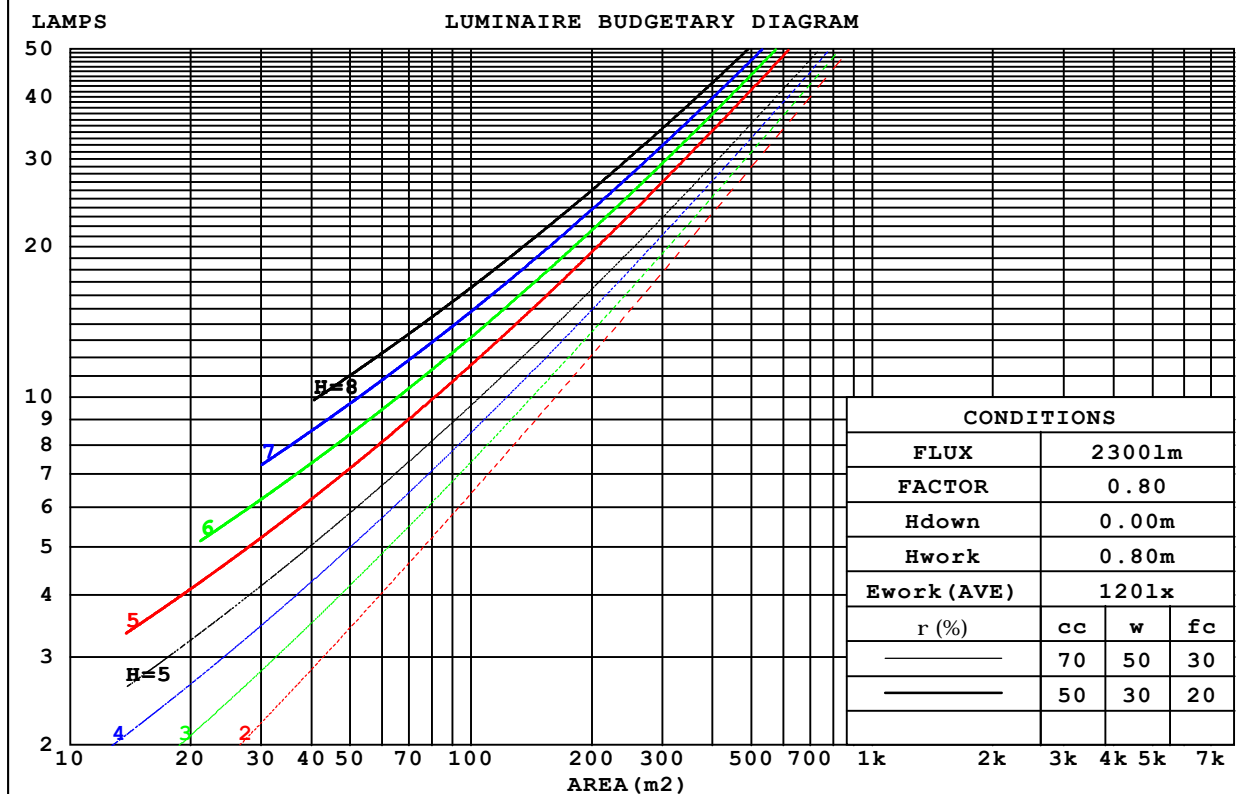
C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 26DEG
 Operators: QA
 Test Date: 2016-07-07

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
 Humidity: 65.0%
 Test Distance: 7.700m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.15	1.15	1.15	1.12	1.12	1.12	1.07	1.07	1.07	1.02	1.02	1.02	.98	.98	.98	.96
1.0	1.01	.97	.94	.99	.95	.92	.95	.92	.89	.91	.89	.86	.87	.85	.84	.82
2.0	.89	.83	.78	.87	.81	.77	.84	.79	.75	.80	.76	.73	.77	.74	.71	.69
3.0	.79	.71	.65	.77	.70	.65	.74	.68	.63	.71	.66	.62	.69	.65	.61	.59
4.0	.70	.62	.56	.69	.61	.55	.66	.60	.54	.64	.58	.54	.62	.57	.53	.51
5.0	.63	.54	.48	.62	.54	.48	.60	.53	.47	.58	.52	.47	.56	.50	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.42	.52	.46	.41	.51	.45	.41	.39
7.0	.51	.43	.37	.51	.43	.37	.49	.42	.37	.48	.41	.37	.46	.41	.36	.34
8.0	.47	.39	.33	.46	.39	.33	.45	.38	.33	.44	.37	.33	.43	.37	.33	.31
9.0	.43	.35	.30	.43	.35	.30	.41	.35	.30	.40	.34	.30	.39	.34	.29	.28
10.0	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.36	.31	.27	.25



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 26DEG
 Operators: QA
 Test Date: 2016-07-07

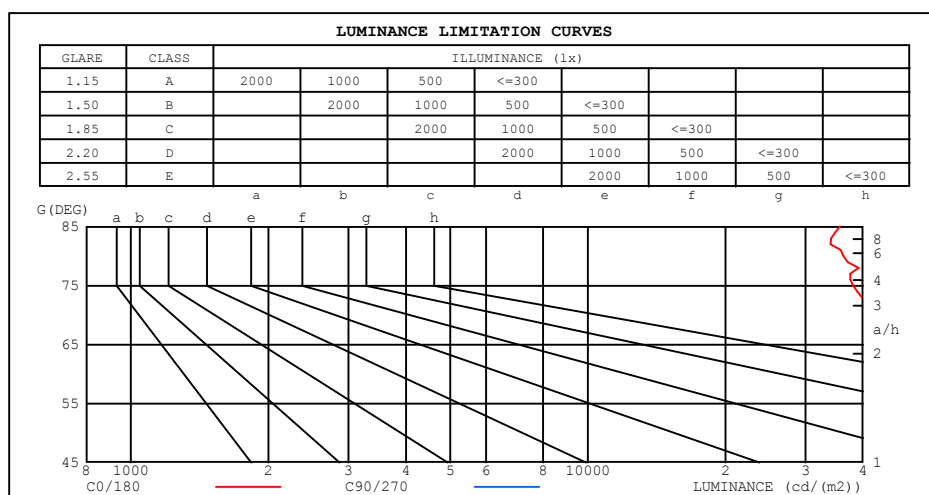
g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
 Humidity: 65.0%
 Test Distance: 7.700m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

ZONAL FLUX DIAGRAM AND LUMINANCE LIMITATION CURVES

ZONAL FLUX DIAGRAM:

g	C0	C45	C90	C135	C180	C225	C270	C315	g	F zone	F total	%
10	3230	3206	3207	3193	3196	3193	3207	3206	0- 10	306.3	306.3	3.33
20	3202	3238	3275	3259	3216	3259	3275	3238	10- 20	910.5	1217	13.24
30	2925	3121	3249	3178	3027	3178	3249	3121	20- 30	1496	2712	29.51
40	2423	2571	2662	2615	2409	2615	2662	2571	30- 40	1794	4506	49.03
50	1775	1972	1988	1947	1645	1947	1988	1972	40- 50	1737	6243	67.92
60	1057	1274	1263	1211	935.1	1211	1263	1274	50- 60	1381	7624	82.95
70	530.3	674.8	670.1	629.9	473.8	629.9	670.1	674.8	60- 70	876.9	8501	92.49
80	226.4	290.5	292.0	270.1	190.7	270.1	292.0	290.5	70- 80	451.0	8952	97.39
90	36.95	74.31	84.62	69.21	33.02	69.21	84.62	74.31	80- 90	169.2	9122	99.24
100	13.75	9.644	4.970	11.75	16.22	11.75	4.970	9.644	90-100	23.90	9145	99.50
110	4.538	4.878	7.397	7.641	9.001	7.641	7.397	4.878	100-110	9.048	9154	99.59
120	3.807	5.867	7.851	7.406	5.757	7.406	7.851	5.867	110-120	6.233	9161	99.66
130	5.966	7.601	9.742	8.943	6.463	8.943	9.742	7.601	120-130	6.498	9167	99.73
140	8.109	9.347	11.48	10.25	8.445	10.25	11.48	9.347	130-140	6.983	9174	99.81
150	10.19	11.13	12.69	11.71	10.60	11.71	12.69	11.13	140-150	6.652	9181	99.88
160	12.54	12.57	13.94	13.23	12.89	13.23	13.94	12.57	150-160	5.667	9187	99.94
170	14.55	14.44	14.68	14.45	14.73	14.45	14.68	14.44	160-170	3.910	9190	99.98
180	15.02	15.45	15.45	14.89	15.02	14.89	15.45	15.45	170-180	1.417	9192	100.00
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	35675	55214
80	36243	46654
75	38095	49047
70	43105	54350
65	50144	61596
60	58791	70072
55	68183	78614
50	76783	85781
45	83401	91657

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 26DEG
Operators: QA
Test Date: 2016-07-07

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
Humidity: 65.0%
Test Distance: 7.700m [K=1.0000]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

WEC AND CCEC

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.281	.160	.051	.274	.156	.050	.261	.150	.048	.249	.144	.046	.238	.138	.044	
2.0	.266	.146	.045	.260	.143	.044	.248	.138	.043	.237	.133	.042	.228	.129	.041	
3.0	.248	.132	.039	.242	.130	.039	.232	.126	.038	.223	.122	.037	.214	.118	.037	
4.0	.230	.120	.035	.225	.118	.035	.216	.115	.034	.208	.112	.034	.200	.109	.033	
5.0	.214	.109	.032	.210	.108	.031	.202	.105	.031	.194	.102	.030	.187	.100	.030	
6.0	.200	.100	.029	.196	.099	.028	.189	.097	.028	.182	.094	.028	.176	.092	.027	
7.0	.187	.092	.026	.183	.091	.026	.177	.089	.026	.171	.088	.025	.165	.086	.025	
8.0	.175	.085	.024	.172	.085	.024	.166	.083	.024	.161	.081	.023	.156	.080	.023	
9.0	.164	.080	.022	.162	.079	.022	.156	.077	.022	.152	.076	.022	.147	.075	.022	
10.0	.155	.074	.021	.153	.074	.021	.148	.072	.020	.143	.071	.020	.139	.070	.020	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients (CCEC)									
0.0	.190	.190	.190	.162	.162	.162	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.179	.157	.137	.153	.135	.118	.105	.093	.082	.060	.054	.047	.019	.017	.015	
2.0	.170	.133	.103	.146	.115	.089	.100	.079	.062	.058	.046	.036	.018	.015	.012	
3.0	.162	.116	.080	.139	.100	.069	.096	.070	.048	.055	.041	.029	.018	.013	.009	
4.0	.155	.103	.064	.133	.089	.055	.091	.062	.039	.053	.036	.023	.017	.012	.008	
5.0	.148	.093	.053	.127	.081	.046	.087	.056	.032	.051	.033	.019	.016	.011	.006	
6.0	.141	.085	.045	.121	.074	.039	.084	.052	.028	.049	.030	.016	.016	.010	.005	
7.0	.135	.078	.039	.116	.068	.034	.080	.048	.024	.046	.028	.014	.015	.009	.005	
8.0	.129	.073	.034	.111	.063	.030	.077	.044	.021	.045	.026	.013	.014	.009	.004	
9.0	.123	.068	.031	.106	.059	.027	.073	.041	.019	.043	.024	.011	.014	.008	.004	
10.0	.118	.064	.028	.101	.055	.024	.070	.039	.017	.041	.023	.010	.013	.008	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 26DEG
 Operators: QA
 Test Date: 2016-07-07

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
 Humidity: 65.0%
 Test Distance: 7.700m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

Uncorrected UGR 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	2H	27.3	28.8	27.6	29.0	29.2	27.9	29.4	28.2	29.6	29.8
	3H	28.2	29.5	28.5	29.8	30.0	28.9	30.3	29.3	30.5	30.8
	4H	28.5	29.8	28.8	30.0	30.3	29.3	30.6	29.7	30.9	31.1
	6H	28.7	29.9	29.1	30.2	30.5	29.6	30.8	30.0	31.1	31.4
	8H	28.8	30.0	29.2	30.3	30.6	29.8	30.9	30.1	31.2	31.5
	12H	28.9	30.0	29.2	30.3	30.6	29.9	31.0	30.3	31.3	31.6
4H	2H	27.9	29.1	28.2	29.4	29.7	28.4	29.6	28.7	29.9	30.2
	3H	28.9	30.0	29.3	30.3	30.6	29.6	30.7	29.9	31.0	31.3
	4H	29.3	30.3	29.7	30.7	31.0	30.1	31.1	30.5	31.4	31.8
	6H	29.7	30.6	30.1	31.0	31.3	30.5	31.4	30.9	31.8	32.2
	8H	29.8	30.7	30.3	31.1	31.5	30.7	31.5	31.1	31.9	32.3
	12H	29.9	30.7	30.4	31.1	31.5	30.9	31.7	31.3	32.1	32.5
8H	4H	29.6	30.4	30.0	30.8	31.2	30.2	31.1	30.7	31.5	31.9
	6H	30.1	30.8	30.5	31.2	31.6	30.8	31.5	31.3	31.9	32.4
	8H	30.3	30.9	30.8	31.4	31.8	31.1	31.7	31.6	32.2	32.6
	12H	30.5	31.0	31.0	31.5	32.0	31.4	32.0	31.9	32.4	32.9
12H	4H	29.6	30.3	30.0	30.7	31.2	30.2	31.0	30.7	31.4	31.8
	6H	30.2	30.8	30.6	31.2	31.7	30.9	31.5	31.4	31.9	32.4
	8H	30.5	31.0	30.9	31.4	31.9	31.2	31.8	31.7	32.2	32.7
Variations with the observer position at spacings:											
S = 1.0H		+ 0.3 / - 0.3					+ 0.2 / - 0.3				
1.5H		+ 0.2 / - 0.5					+ 0.2 / - 0.4				
2.0H		+ 0.4 / - 0.7					+ 0.4 / - 0.4				

CIE Pub.117 Corrected 9500 lm Total Lamp Luminous Flux. (8log(F/F0) = 7.8)

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 26DEG
 Operators: QA
 Test Date: 2016-07-07

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
 Humidity: 65.0%
 Test Distance: 7.700m [K=1.0000]
 Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

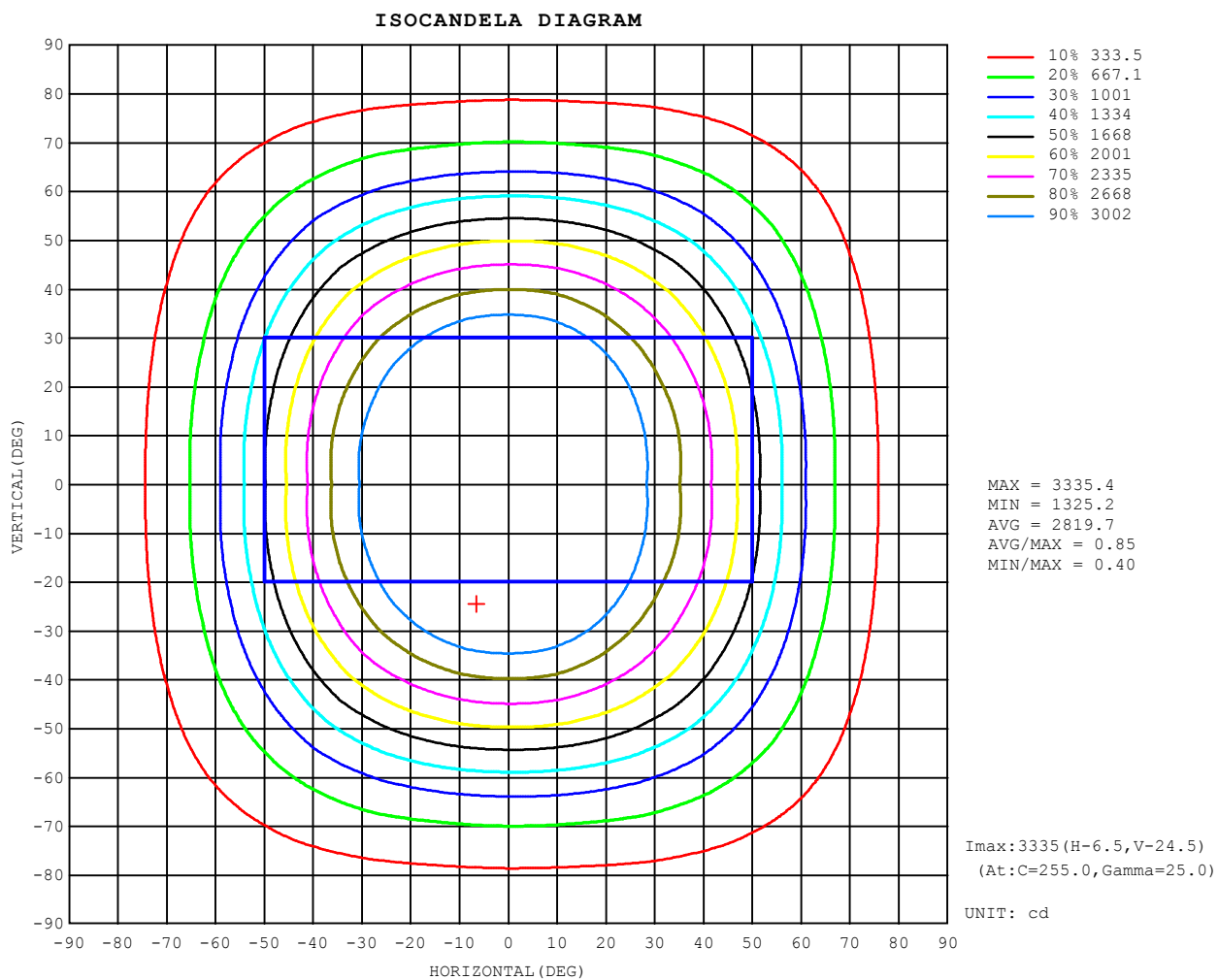
UTILIZATION FACTORS TABLE

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) x RCR = 5									
k = 0.60	58	47	41	57	47	40	56	46	40	34
0.80	68	57	50	67	57	50	65	56	50	43
1.00	76	66	59	75	65	59	73	66	58	52
1.25	83	73	67	81	72	66	79	71	65	59
1.50	87	78	72	86	77	71	83	76	70	63
2.00	93	86	80	92	85	79	88	82	78	70
2.50	97	90	84	95	89	84	91	86	82	74
3.00	100	94	89	98	92	88	94	89	85	77
4.00	103	98	94	101	97	93	97	93	90	81
5.00	106	101	97	103	99	96	99	96	93	84
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004				Suspended				SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: HIGH
 Temperature: 26DEG
 Operators: QA
 Test Date: 2016-07-07

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
 Humidity: 65.0%
 Test Distance: 7.700m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

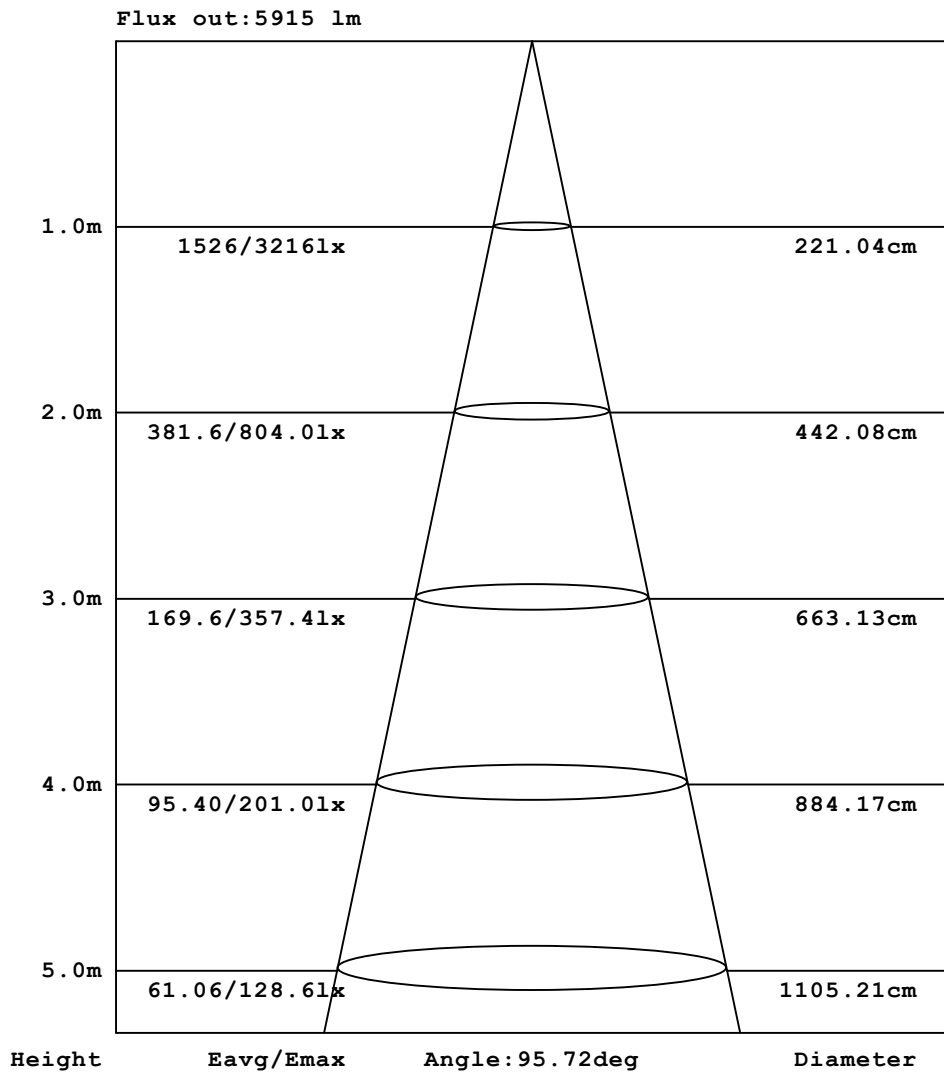


C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 26DEG
Operators: QA
Test Date: 2016-07-07

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
Humidity: 65.0%
Test Distance: 7.700m [K=1.0000]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

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: 15.0DEG
Test Speed: HIGH
Temperature:26DEG
Operators:QA
Test Date:2016-07-07

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V1.0.255
Humidity:65.0%
Test Distance:7.700m [K=1.0000]
Remarks:

EVERFINE GONIOPHOTOMETERS SYSTEM TEST REPORT

Average Luminance Table(CIBSE)

Parameter description for average Luminance	Symbol	Value	Unit
Luminance in Azimuth Plane	Bc	refer Table 2	cd/sq.m.
Intensity at angle Gamma in given azimuth plane	I	from data	cd/klm
Number of lamps	N	1	
Output of each lamp(initial lumens as specified)	F	9500	lm
Multiplying factor	K	1	
Luminous area in horizontal plane used in calculations	A	0.036	sq.m.
Angle to the downward vertical from light centre	Gamma	from data	deg

Table 1. Calculation parameters for determination of CIBSE LG3:1996 Average Luminance

G	C plane(deg)																		
deg	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
55	68183706347318975724779927936079733795007903778614784957844578145771047465070979672106361161423																		
60	58791612866420667278698407134371689711937053970072699346987269521682956561761743578715420951993																		
65	50144524735547158797616526320363389629686225461596614906143661055599795733353354494134615044508																		
70	43105450014791351326538585552156132551965448254350538365393154169524244972646508428873991838508																		
75	38095396884225245375480044980350506497464915349047485194840148361468104423241013376673501633800																		
80	36243394244105842008450524702247315472394697046654463484583845027440704151837718350413239530529																		
85	35675396394340347075512045397654983548135488755214541525298751847500654679142400387823498632282																		

Table 2. Average Luminance(cd/sq.m.) for defined C plane,Gamma angle

CIBSE Category	Gamma (deg)	Average Luminance		Patch Luminance	
		maximum	specified	maximum	specified
		calculated	maximum	measured	maximum
Category 1	55 to 90	79733	500		1500
Category 2	65 to 90	63389	500		1500
Category 3	75 to 90	55214	500		1500

Table 3. Tabulation of Average and Patch Luminance(cd/sq.m.) for defined CIBSE categories

C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: HIGH
Temperature: 26DEG
Operators: QA
Test Date: 2016-07-07

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V1.0.255
Humidity: 65.0%
Test Distance: 7.700m [K=1.0000]
Remarks: