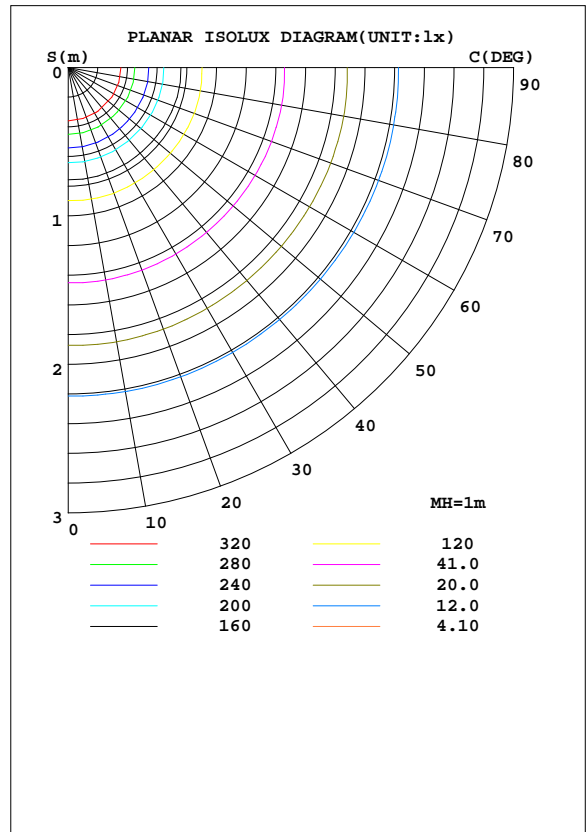
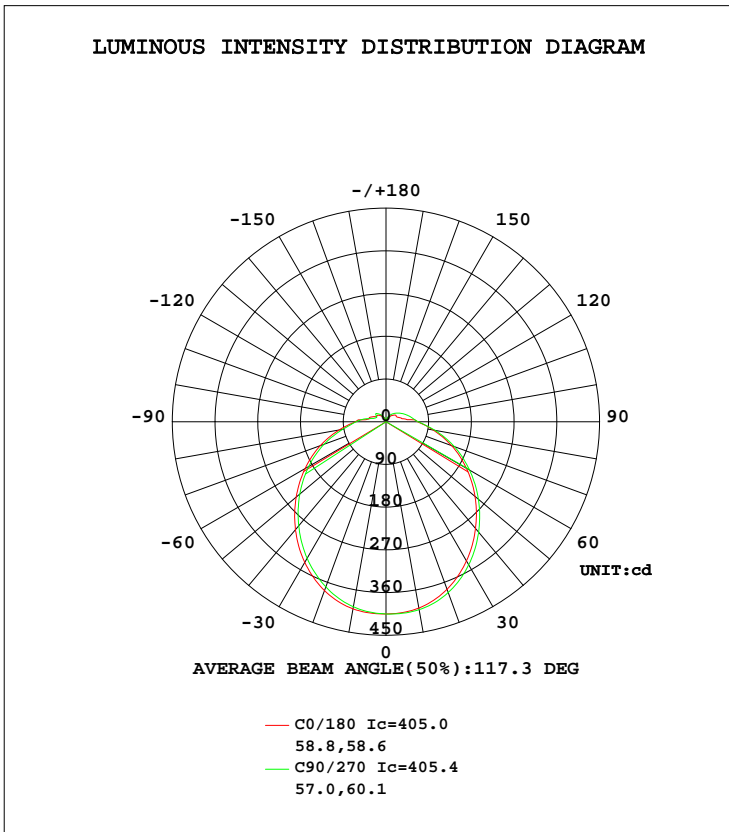


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:119.89V I:0.2016A P:12.638W PF:0.5229 Freq:59.98Hz Lamp Flux:1512.64x1 lm		
NAME:1 lamp of STRING-50-850-ECO	TYPE:	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.:
MFR.: RAB lighting INC	SUR.: 0.595*0.595	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 119.69 lm/W			
MODEL		I _{max} (cd)	405.5	S/MH(C0/180)	1.26
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.23
RATED VOLTAGE(V)		TOTAL FLUX(lm)	1512.6	η UP, DN(C0-180)	7.2,44.2
NOMINAL FLUX(lm)	1512.64	CIE CLASS	SEMI-D.	η UP, DN(C180-360)	6.4,42.2
LAMPS INSIDE	1	η up(%)	13.6	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)		η down(%)	86.4	CIBSE SHR MAX	1.35



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JZ
 Test Date:2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity:65.0%
 Test Distance:8.450m [K=1.0000]
 Remarks:

ZONAL FLUX DIAGRAM

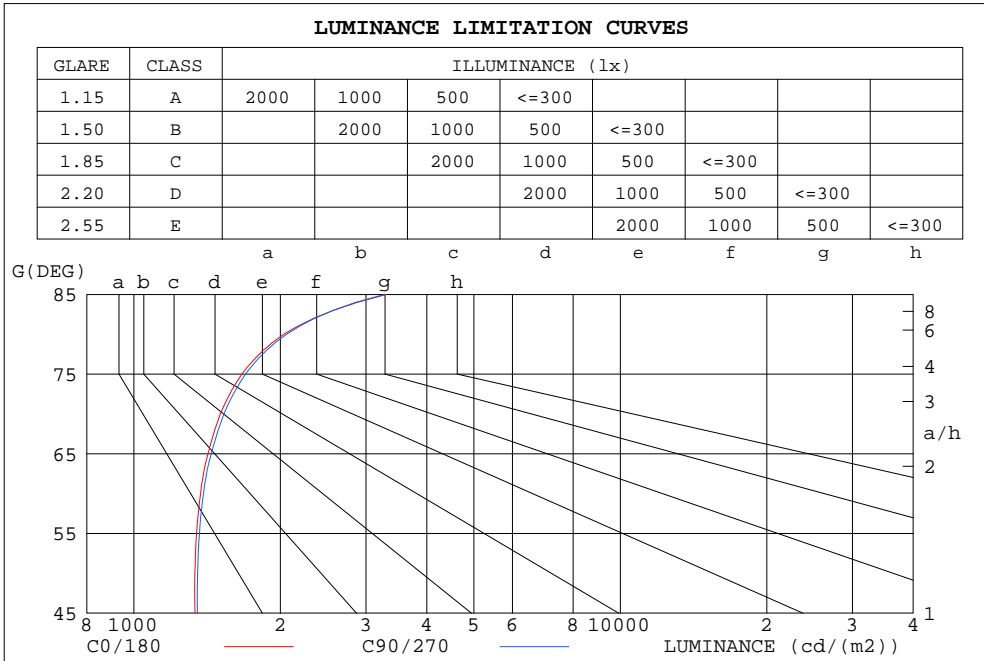
ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
10	398.6	400.2	402.2	402.4	400.1	397.8	396.0	396.0	0- 10	38.40	38.40	2.54,2.54
20	375.6	379.1	383.1	383.8	378.8	373.9	370.4	370.9	10- 20	110.1	148.5	9.81,9.81
30	338.9	343.2	348.3	349.3	342.2	336.3	332.2	333.2	20- 30	165.9	314.4	20.8,20.8
40	293.6	298.4	303.7	304.2	296.8	290.2	286.1	287.5	30- 40	199.4	513.8	34,34
50	245.0	249.3	254.1	254.4	247.0	240.9	237.0	238.7	40- 50	209.0	722.8	47.8,47.8
60	195.7	199.6	203.3	203.9	196.9	191.3	187.8	189.6	50- 60	197.7	920.5	60.9,60.9
70	147.0	149.8	153.2	153.6	147.2	141.8	138.7	140.1	60- 70	169.6	1090	72.1,72.1
80	100.9	101.9	104.6	104.8	100.2	95.13	92.78	93.92	70- 80	129.2	1219	80.6,80.6
90	66.98	67.64	68.02	68.04	65.01	64.34	62.94	65.65	80- 90	87.98	1307	86.4,86.4
100	36.99	54.38	54.26	54.02	36.21	49.23	38.59	53.77	90-100	63.16	1370	90.6,90.6
110	27.68	44.61	44.62	44.41	30.92	30.61	24.04	43.96	100-110	46.28	1417	93.7,93.7
120	24.83	36.06	35.94	36.05	22.93	34.80	22.99	35.42	110-120	35.02	1452	96,96
130	22.06	28.42	28.54	28.65	21.74	27.46	27.24	27.64	120-130	26.25	1478	97.7,97.7
140	16.40	21.48	21.86	21.93	16.50	20.51	20.73	17.89	130-140	17.56	1496	98.9,98.9
150	11.44	14.84	15.72	15.42	11.80	13.92	14.39	10.28	140-150	10.16	1506	99.5,99.5
160	7.018	8.787	9.846	9.505	7.320	8.127	8.536	5.544	150-160	4.944	1511	99.9,99.9
170	3.288	4.167	4.709	4.510	3.637	3.685	3.823	2.831	160-170	1.696	1512	100,100
180	2.056	2.121	2.278	2.017	2.079	2.098	2.266	2.040	170-180	0.2761	1513	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JZ
 Test Date:2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity:65.0%
 Test Distance:8.450m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



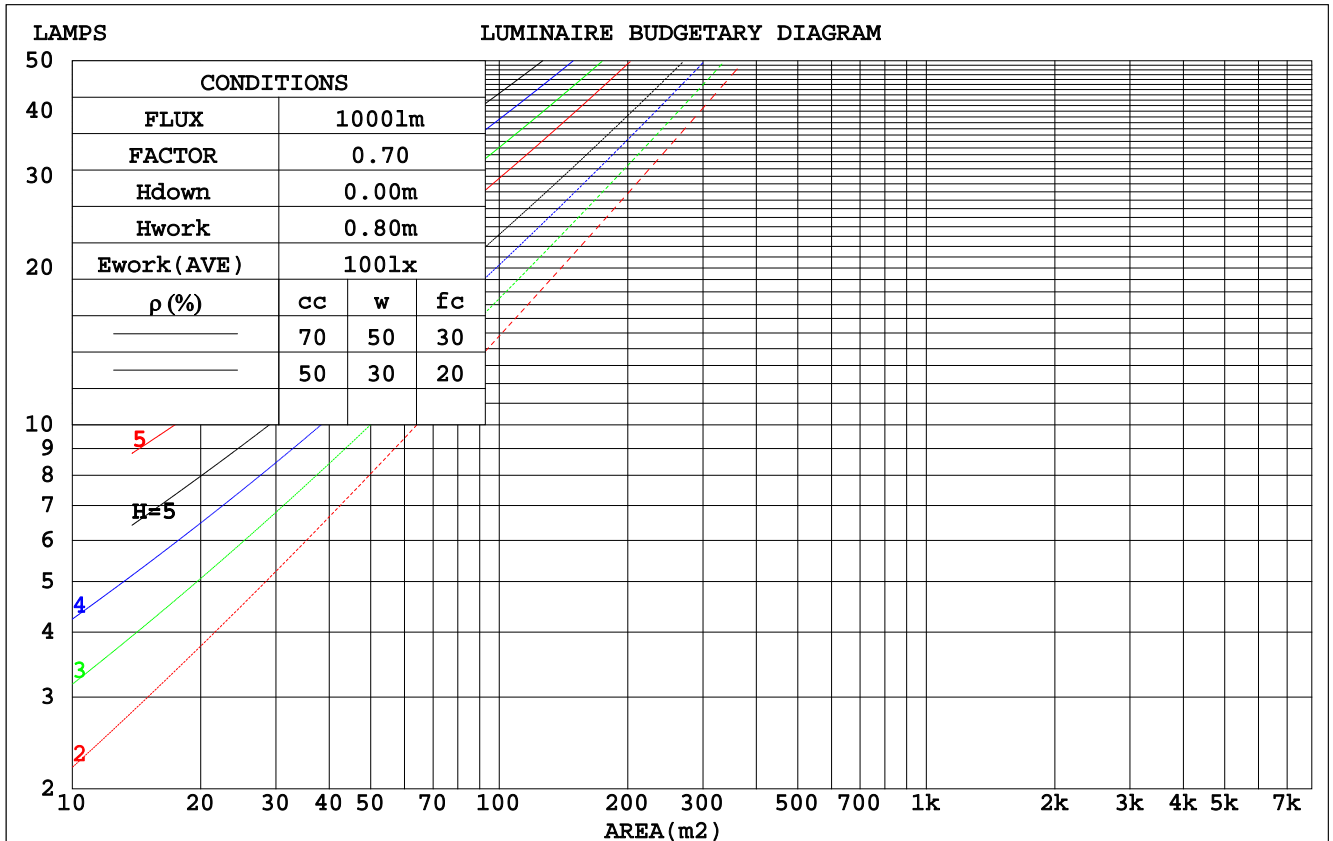
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3309	3273
80	2035	2060
75	1668	1696
70	1506	1531
65	1420	1441
60	1371	1390
55	1346	1364
50	1335	1352
45	1335	1350

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [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	1.16	1.16	1.16	1.12	1.12	1.12	1.04	1.04	1.04	.96	.96	.96	.90	.90	.90	.86
1.0	.98	.93	.88	.94	.90	.86	.88	.84	.81	.81	.78	.76	.76	.73	.71	.68
2.0	.84	.77	.71	.81	.74	.69	.76	.70	.65	.70	.66	.62	.65	.61	.58	.55
3.0	.74	.65	.58	.71	.63	.57	.66	.59	.54	.61	.56	.51	.57	.53	.49	.46
4.0	.65	.56	.49	.63	.54	.48	.58	.51	.45	.54	.48	.43	.51	.46	.41	.39
5.0	.58	.48	.42	.56	.47	.41	.52	.45	.39	.49	.42	.37	.46	.40	.36	.33
6.0	.52	.43	.36	.50	.42	.35	.47	.40	.34	.44	.38	.33	.41	.36	.31	.29
7.0	.47	.38	.32	.45	.37	.31	.43	.35	.30	.40	.34	.29	.38	.32	.28	.25
8.0	.43	.34	.28	.41	.33	.28	.39	.32	.27	.37	.30	.26	.35	.29	.25	.23
9.0	.39	.31	.25	.38	.30	.25	.36	.29	.24	.34	.28	.23	.32	.26	.22	.20
10.0	.36	.28	.23	.35	.27	.22	.33	.26	.22	.31	.25	.21	.30	.24	.20	.18



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [K=1.0000]
 Remarks:

WEC AND CCEC

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						Wall Exitance Coefficients(WEC)									
0.0																
1.0	.360	.205	.065	.349	.199	.063	.328	.188	.060	.308	.178	.057	.290	.168	.054	
2.0	.318	.174	.053	.308	.170	.052	.289	.161	.050	.271	.152	.048	.255	.144	.045	
3.0	.286	.152	.046	.277	.148	.045	.259	.141	.043	.244	.133	.041	.229	.127	.039	
4.0	.259	.135	.040	.251	.131	.039	.235	.125	.037	.221	.119	.036	.208	.113	.034	
5.0	.237	.121	.035	.229	.118	.034	.215	.112	.033	.202	.107	.032	.190	.101	.030	
6.0	.218	.109	.031	.211	.107	.031	.198	.102	.030	.186	.097	.028	.175	.092	.027	
7.0	.201	.100	.028	.195	.097	.028	.184	.093	.027	.173	.089	.026	.162	.084	.025	
8.0	.187	.091	.026	.182	.089	.025	.171	.085	.024	.161	.082	.024	.152	.078	.023	
9.0	.175	.085	.024	.170	.083	.023	.160	.079	.022	.151	.076	.022	.142	.072	.021	
10.0	.164	.079	.022	.159	.077	.021	.150	.074	.021	.142	.070	.020	.134	.067	.019	

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						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.294	.294	.294	.251	.251	.251	.171	.171	.171	.098	.098	.098	.031	.031	.031	
1.0	.288	.260	.235	.246	.223	.202	.169	.154	.140	.097	.089	.081	.031	.029	.026	
2.0	.281	.237	.200	.240	.204	.173	.165	.141	.120	.095	.082	.071	.030	.027	.023	
3.0	.273	.220	.178	.234	.190	.154	.161	.132	.108	.093	.077	.064	.030	.025	.021	
4.0	.265	.207	.163	.228	.179	.141	.157	.125	.100	.091	.073	.059	.029	.024	.019	
5.0	.258	.197	.153	.221	.171	.133	.152	.119	.094	.088	.070	.056	.028	.023	.018	
6.0	.250	.189	.145	.215	.164	.126	.148	.115	.090	.086	.067	.053	.028	.022	.018	
7.0	.243	.182	.140	.209	.158	.122	.145	.111	.086	.084	.065	.051	.027	.021	.017	
8.0	.237	.177	.136	.204	.153	.118	.141	.108	.084	.082	.064	.050	.027	.021	.017	
9.0	.231	.172	.132	.199	.149	.116	.138	.105	.082	.080	.062	.049	.026	.020	.016	
10.0	.225	.168	.130	.194	.146	.113	.134	.103	.081	.078	.061	.048	.025	.020	.016	

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JZ
 Test Date:2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity:65.0%
 Test Distance:8.450m [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	12.2	13.6	12.8	14.2	14.8	12.3	13.7	12.8	14.3	14.9
3H	14.5	15.8	15.1	16.4	17.1	14.6	15.9	15.2	16.5	17.2
4H	15.7	16.9	16.2	17.5	18.2	15.8	17.0	16.4	17.6	18.3
6H	16.8	17.9	17.4	18.5	19.2	16.9	18.0	17.5	18.6	19.3
8H	17.4	18.5	18.0	19.1	19.8	17.5	18.6	18.1	19.2	19.9
12H	18.0	19.1	18.7	19.7	20.4	18.1	19.2	18.7	19.8	20.5
4H 2H	12.9	14.2	13.5	14.8	15.4	13.0	14.2	13.6	14.8	15.5
3H	15.5	16.6	16.2	17.2	17.9	15.6	16.7	16.2	17.3	18.0
4H	16.8	17.8	17.5	18.4	19.2	16.9	17.9	17.6	18.5	19.3
6H	18.2	19.0	18.8	19.7	20.4	18.3	19.1	18.9	19.8	20.5
8H	18.8	19.6	19.5	20.3	21.1	19.0	19.8	19.6	20.4	21.2
12H	19.6	20.4	20.3	21.0	21.8	19.7	20.4	20.4	21.1	21.9
8H 4H	17.4	18.2	18.0	18.8	19.6	17.5	18.3	18.1	18.9	19.7
6H	18.9	19.6	19.6	20.3	21.1	19.0	19.7	19.7	20.4	21.2
8H	19.8	20.4	20.5	21.1	21.9	19.9	20.5	20.6	21.2	22.0
12H	20.8	21.3	21.5	22.0	22.9	20.9	21.4	21.6	22.1	22.9
12H 4H	17.5	18.2	18.2	18.9	19.7	17.6	18.3	18.2	19.0	19.7
6H	19.1	19.7	19.8	20.4	21.2	19.2	19.8	19.9	20.5	21.3
8H	20.1	20.6	20.8	21.3	22.2	20.2	20.7	20.9	21.4	22.3
CIE190: 2010										

CIE190: 2010
 Area: 0.29146 m2

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [K=1.0000]
 Remarks:

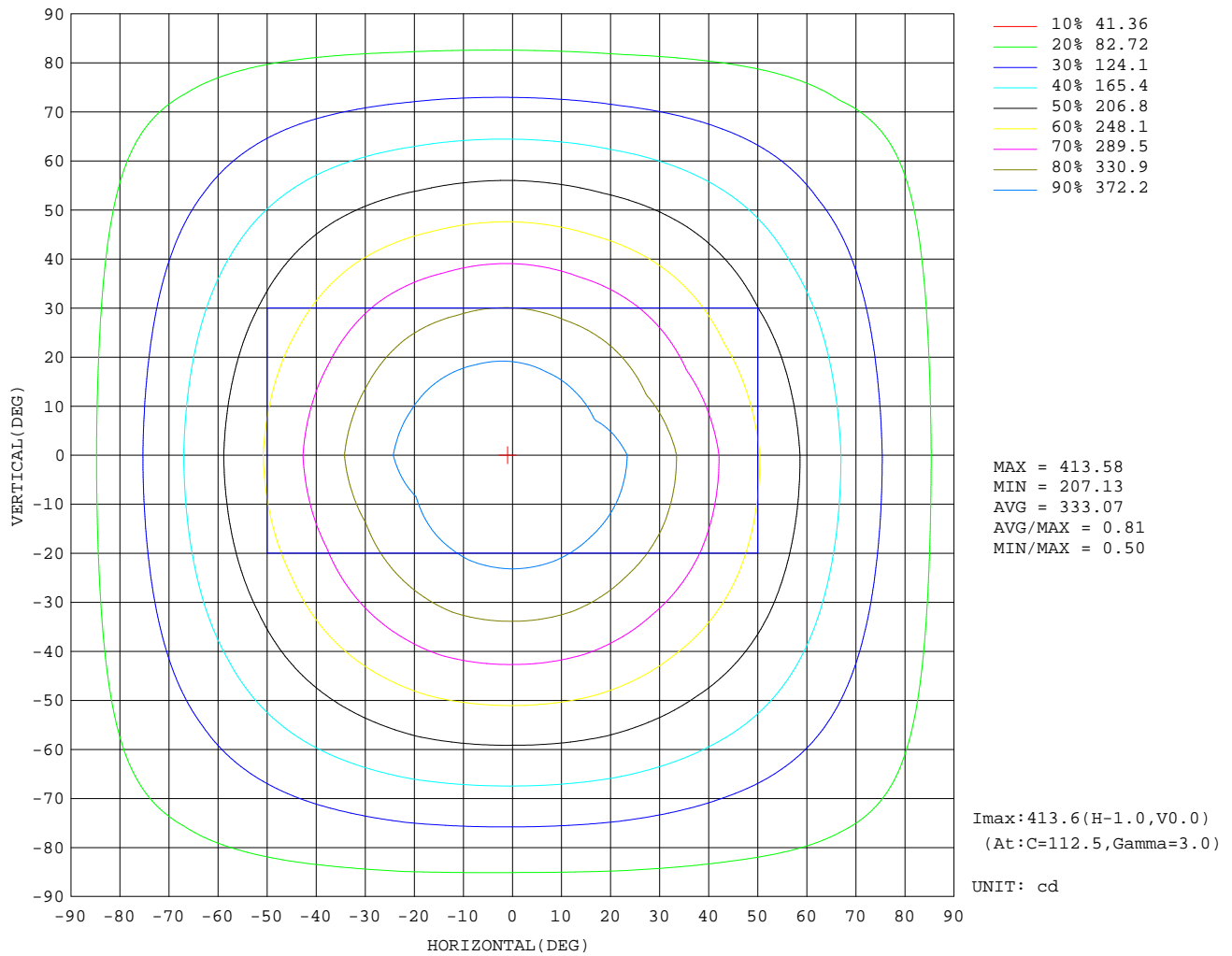
UTILIZATION FACTORS TABLE

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	51	39	32	50	39	32	48	38	31	25
0.80	60	48	40	59	47	40	56	46	39	31
1.00	68	56	48	66	55	47	63	56	46	38
1.25	75	63	55	73	62	54	69	60	53	44
1.50	80	69	61	78	67	60	73	64	58	48
2.00	87	77	69	84	75	68	79	72	65	55
2.50	91	82	75	88	80	73	83	76	70	59
3.00	95	87	80	92	84	78	86	80	74	62
4.00	100	92	86	96	90	84	90	84	80	67
5.00	102	96	91	99	93	88	92	87	83	70
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended				SHRNOM = 1.25			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [K=1.0000]
 Remarks:

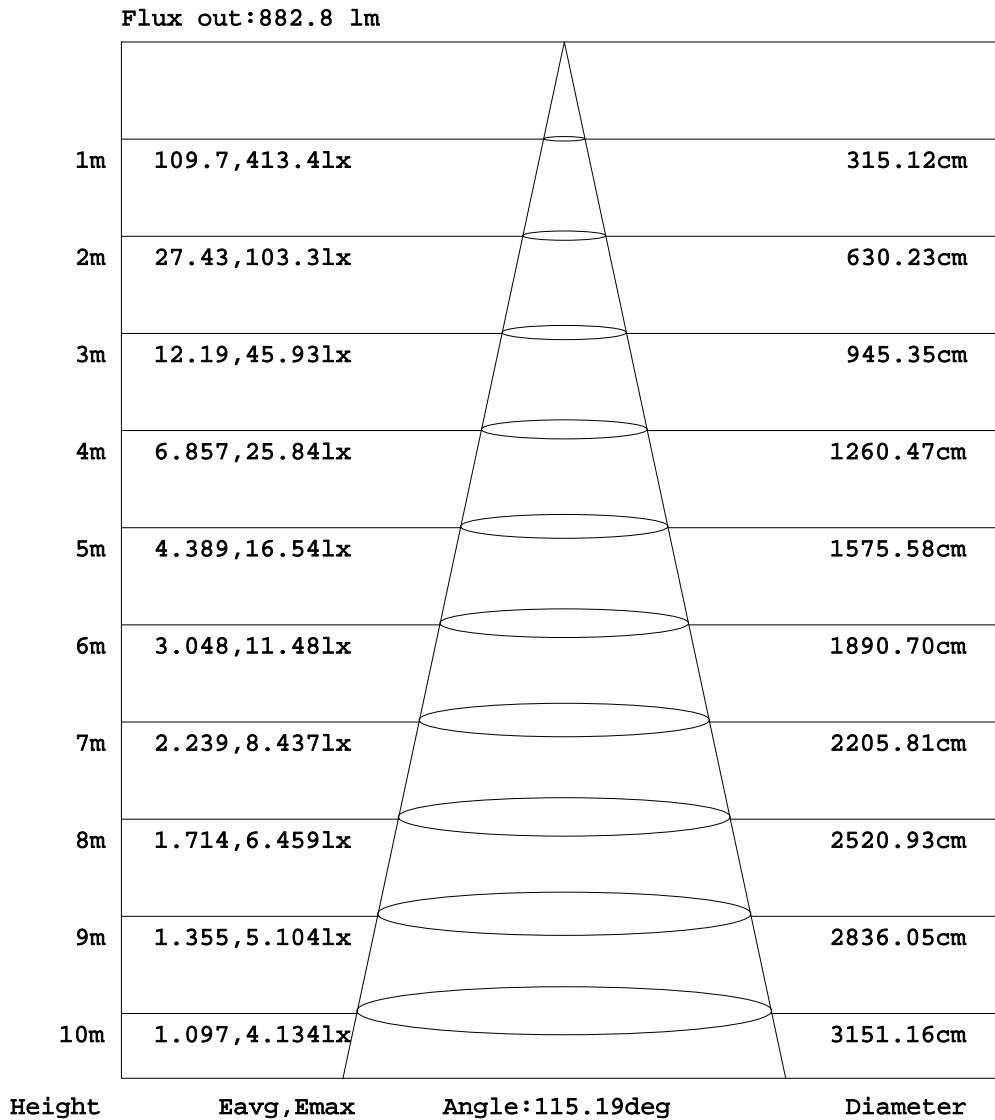
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [K=1.0000]
 Remarks:

AAI Figure

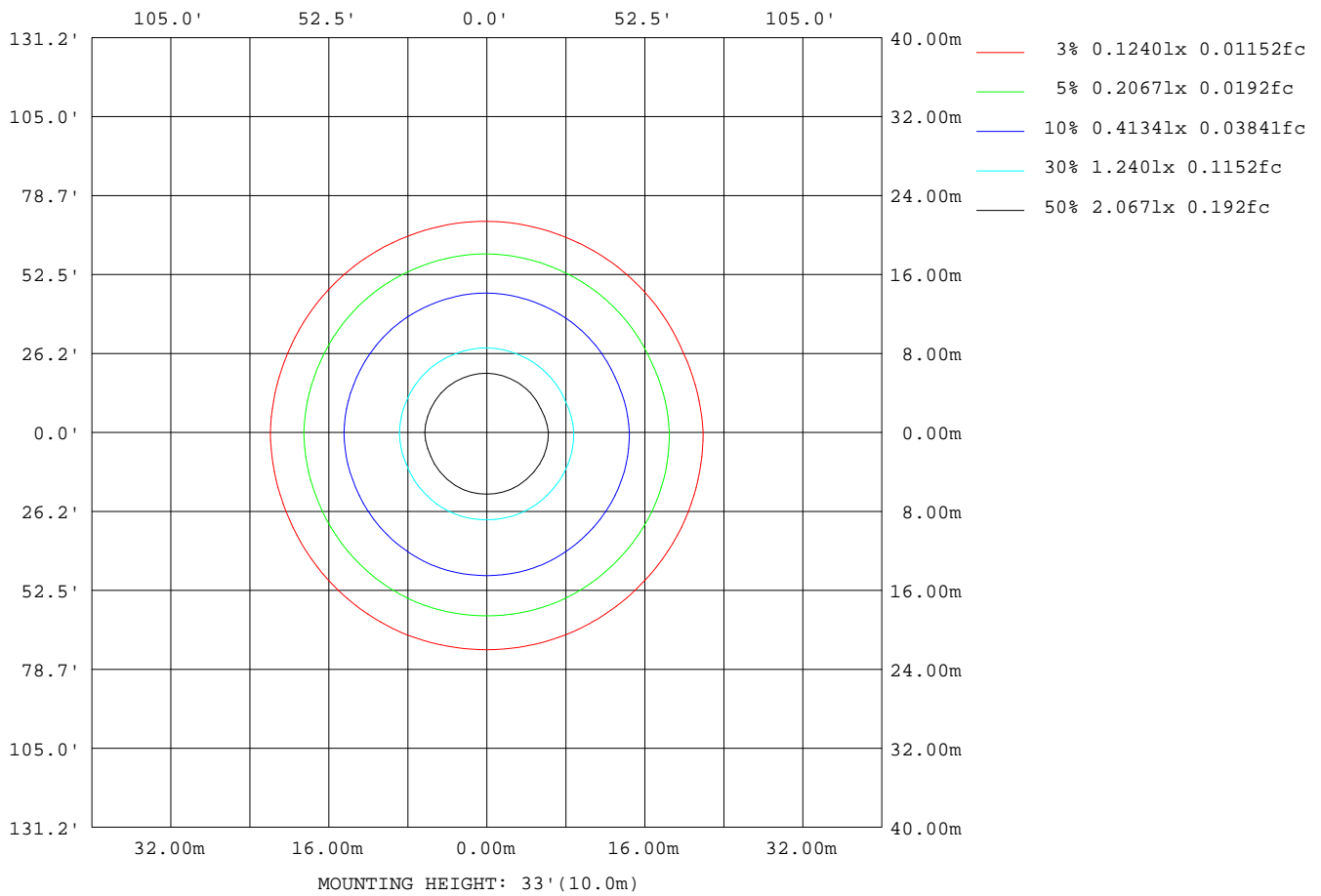


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JZ
 Test Date:2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity:65.0%
 Test Distance:8.450m [K=1.0000]
 Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:119.89V I:0.2016A P:12.638W PF:0.5229 Freq:59.98Hz Lamp Flux:1512.64x1 lm		
NAME: HS0003(String-50-850-ECO)String-50-850-ECO	TYPE:	WEIGHT:
SPEC.: 5000K	DIM.:	SERIAL No.:
MFR.: RAB lighting INC	SUR.: 0.595*0.595	Shielding Angle:

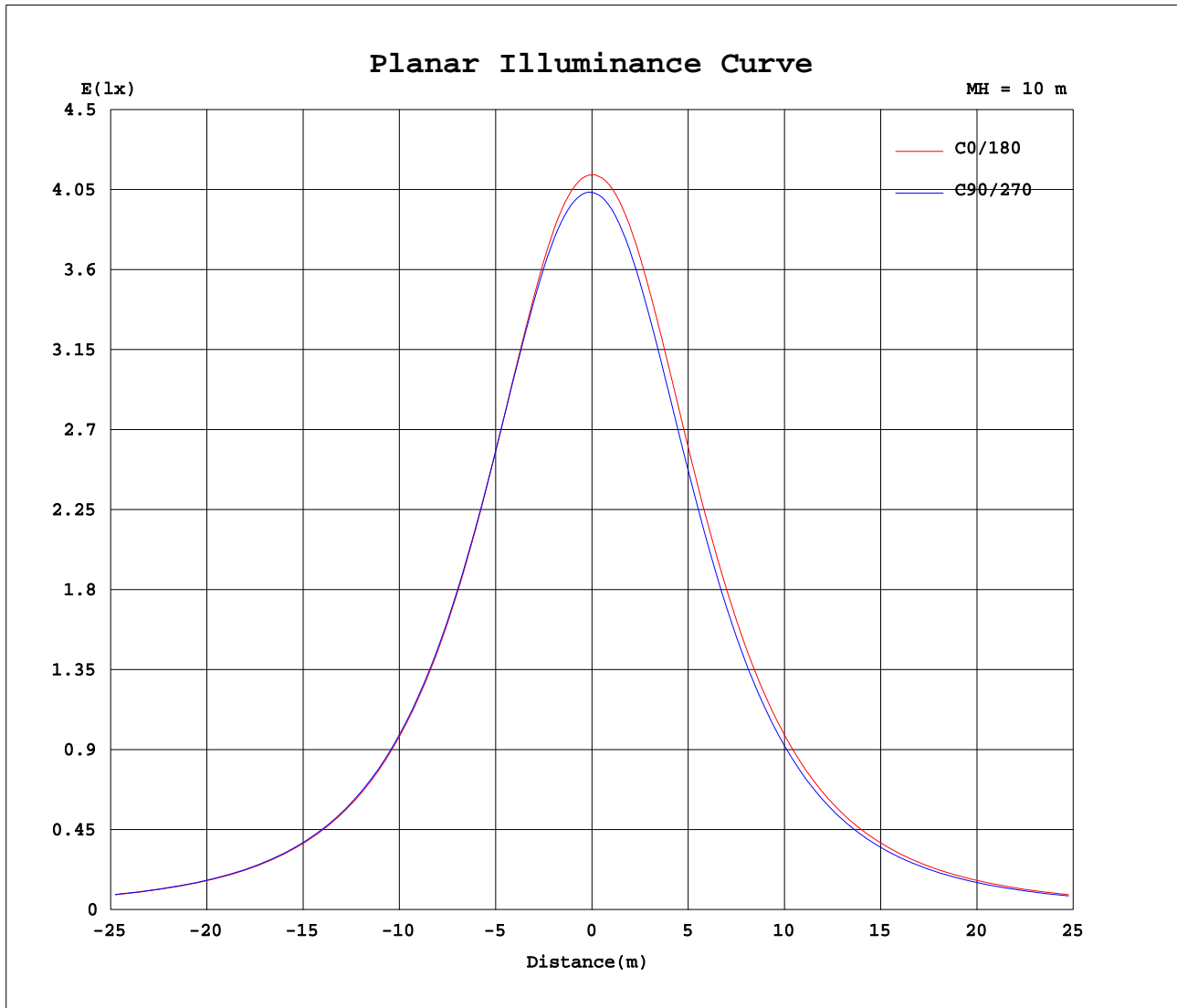
AvgL	cd/m2
L_0~180(65)av	1393
L_0~180(75)av	1632
L_0~180(85)av	3199
L_90~270(65)av	1386
L_90~270(75)av	1612
L_90~270(85)av	3120
L_45(65)av	1389
L_45(75)av	1616
L_45(85)av	3129

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:JZ
 Test Date:2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity:65.0%
 Test Distance:8.450m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405	405			
5	403	404	404	405	405	405	405	405	404	404	403	403	402	402	403	403			
10	399	400	400	402	402	403	402	402	400	399	398	397	396	396	396	397			
15	389	391	392	394	395	396	395	394	392	390	388	386	385	385	386	387			
20	376	378	379	382	383	384	384	382	379	376	374	372	370	370	371	373			
25	359	361	363	366	367	369	368	366	362	358	356	354	352	351	353	355			
30	339	342	343	347	348	350	349	347	342	338	336	333	332	331	333	335			
35	317	321	322	326	327	329	328	326	320	316	314	310	310	308	311	313			
40	294	297	298	303	304	306	304	302	297	292	290	287	286	285	288	289			
45	269	273	274	278	279	281	280	278	272	267	266	262	262	260	263	265			
50	245	249	249	254	254	256	254	253	247	242	241	238	237	236	239	241			
55	220	224	224	228	229	231	229	227	222	217	216	213	212	211	214	216			
60	196	199	200	203	203	206	204	202	197	192	191	188	188	187	190	191			
65	171	174	175	178	178	180	179	177	172	168	166	164	163	162	165	167			
70	147	149	150	153	153	155	154	151	147	143	142	139	139	138	140	143			
75	123	124	125	128	128	130	129	126	123	119	118	116	115	114	116	118			
80	101	101	102	104	105	106	105	103	100	96.1	95.1	93.4	92.8	92.2	93.9	96.0			
85	82.3	81.2	81.7	83.2	83.4	84.4	83.5	81.9	80.2	76.9	76.4	75.3	75.1	74.9	76.4	77.8			
90	67.0	67.7	67.6	68.3	68.0	68.6	68.0	67.1	65.0	64.3	64.3	64.1	62.9	64.6	65.7	66.4			
95	52.7	60.3	60.0	60.1	59.8	59.9	59.5	59.0	50.0	57.5	57.7	57.6	52.3	58.3	59.2	59.7			
100	37.0	54.7	54.4	54.5	54.3	54.3	54.0	53.6	36.2	51.4	49.2	46.9	38.6	52.9	53.8	53.8			
105	32.5	49.7	49.3	49.5	49.3	49.4	49.1	48.7	35.9	42.7	35.5	31.3	28.0	47.9	48.7	48.1			
110	27.7	44.9	44.6	44.7	44.6	44.8	44.4	44.1	30.9	34.9	30.6	29.7	24.0	42.8	44.0	43.5			
115	25.1	40.1	40.2	40.3	40.2	40.4	40.1	39.5	25.8	28.9	32.9	31.1	22.1	36.6	39.5	38.6			
120	24.8	34.9	36.1	36.2	35.9	36.2	36.1	34.5	22.9	27.1	34.8	34.7	23.0	30.5	35.4	32.9			
125	24.6	29.9	32.1	32.3	32.1	32.4	32.3	29.8	23.1	27.0	31.0	30.9	26.4	25.1	31.5	28.0			
130	22.1	25.4	28.4	28.7	28.5	28.8	28.7	25.6	21.7	23.5	27.5	27.4	27.2	21.4	27.6	23.6			
135	19.3	21.6	24.9	25.2	25.1	25.4	25.3	21.9	19.1	20.1	24.0	23.9	24.0	18.1	23.4	19.9			
140	16.4	18.3	21.5	21.9	21.9	22.1	21.9	18.8	16.5	17.2	20.5	20.6	20.7	14.8	17.9	16.1			
145	13.7	15.4	18.1	18.7	18.8	19.0	18.6	15.9	14.1	14.6	17.1	17.4	17.5	11.6	13.1	12.3			
150	11.4	12.7	14.8	15.5	15.7	15.9	15.4	13.2	11.8	12.0	13.9	14.3	14.4	9.09	10.3	9.49			
155	9.17	10.1	11.7	12.5	12.7	12.8	12.4	10.7	9.46	9.59	10.9	11.3	11.4	6.98	8.59	7.78			
160	7.02	7.67	8.79	9.57	9.85	9.96	9.50	8.27	7.32	7.36	8.13	8.48	8.54	5.88	5.54	6.07			
165	4.99	5.38	6.32	6.89	7.15	7.22	6.88	6.05	5.31	5.27	5.67	5.90	5.94	4.46	3.90	3.80			
170	3.29	3.62	4.17	4.49	4.71	4.73	4.51	4.02	3.64	3.56	3.68	3.80	3.82	3.24	2.83	2.64			
175	2.18	2.32	2.52	2.60	2.70	2.69	2.63	2.40	2.29	2.30	2.34	2.42	2.42	2.22	2.09	2.13			
180	2.06	2.07	2.12	2.15	2.28	2.07	2.02	2.03	2.08	2.08	2.10	2.19	2.27	2.06	2.04	2.05			

C Range: 0 - 360DEG
 C Interval: 22.5DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: JZ
 Test Date: 2022-08-22

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000B_V1 SYSTEM V2.00.429
 Humidity: 65.0%
 Test Distance: 8.450m [K=1.0000]
 Remarks: