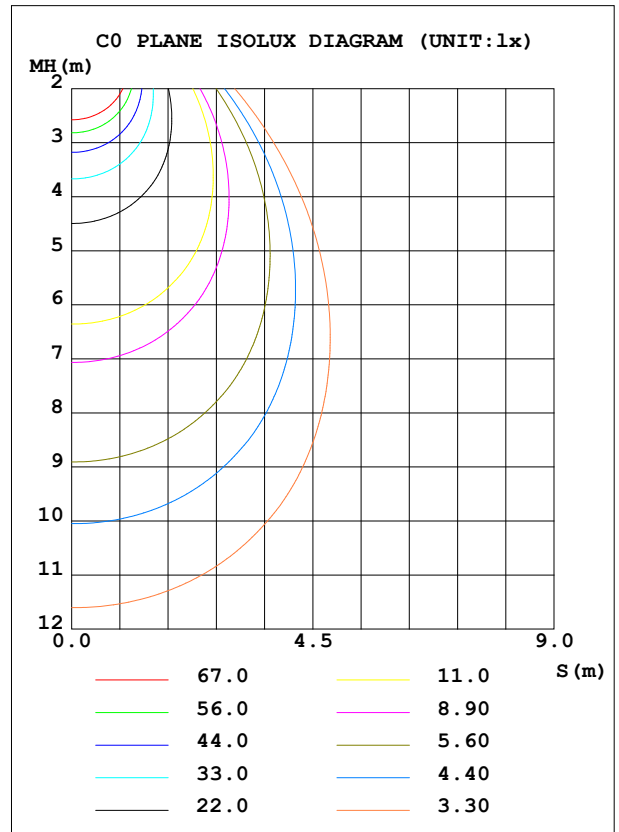
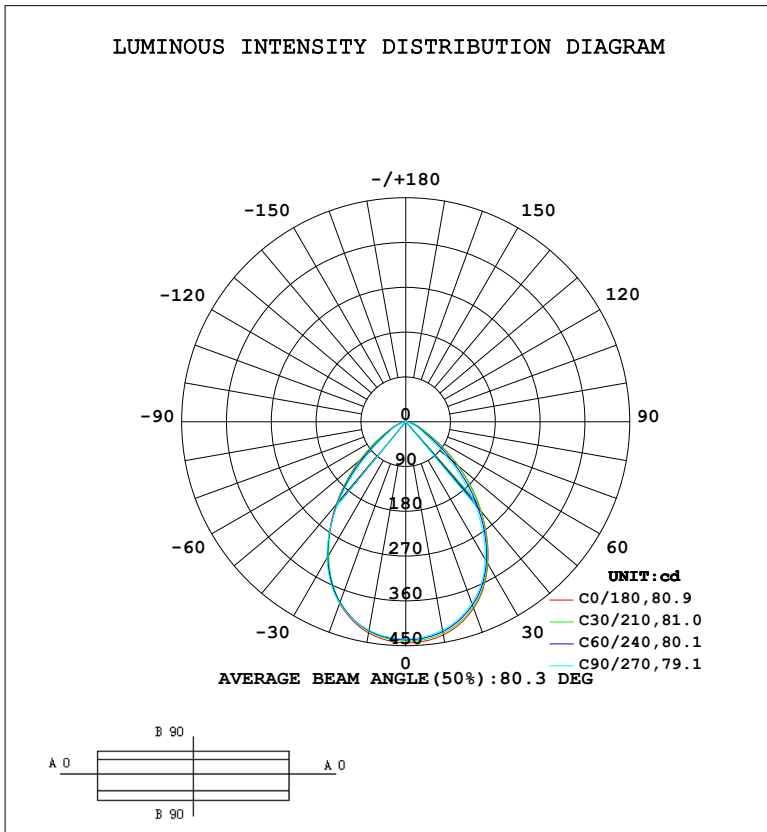


LUMINAIRE PHOTOMETRIC TEST REPORT

Test:U:220.11V I:0.0648A P:7.9785W PF:0.5595 Freq:50.00Hz		
Lamp Flux:731.882x1 lm		
NAME: HYD-219C-7W-6000K	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	

DATA OF LAMP		PHOTOMETRIC DATA			
MODEL		Imax (cd)	444.3	S/MH (C0/180)	1.09
NOMINAL POWER (W)		LOR (%)	100.0	S/MH (C90/270)	1.11
RATED VOLTAGE (V)	--	TOTAL FLUX (lm)	731.88	η UP, DN (C0-180)	0.0,50.8
NOMINAL FLUX (lm)	731.882	CIE CLASS	DIRECT	η UP, DN (C180-360)	0.0,49.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	--	η down (%)	100.0	CIBSE SHR MAX	1.15



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [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	434.8	430.0	425.2	422.5	430.7	426.0	425.2	423.5	0- 10	41.22	41.22	5.63, 5.63
20	398.6	395.1	388.5	384.3	388.7	384.5	387.9	386.9	10- 20	115.5	156.7	21.4, 21.4
30	329.7	328.3	319.0	315.6	313.6	309.8	316.6	318.1	20- 30	163.8	320.6	43.8, 43.8
40	235.8	234.6	215.9	220.1	217.7	213.1	210.5	222.7	30- 40	168.7	489.3	66.9, 66.9
50	136.8	133.6	105.0	118.9	120.9	114.1	97.16	121.0	40- 50	129.3	618.6	84.5, 84.5
60	58.16	54.14	38.63	47.76	47.37	44.20	36.88	48.66	50- 60	69.19	687.8	94, 94
70	24.71	22.20	15.26	20.09	20.18	18.65	15.06	21.78	60- 70	31.06	718.9	98.2, 98.2
80	7.776	4.715	1.091	3.640	5.071	2.785	1.429	5.162	70- 80	11.79	730.7	99.8, 99.8
90	0.2631	0.0283	0.0067	0.0209	0.1058	0.0783	0.0492	0.0768	80- 90	1.205	731.9	100, 100
100									90-100			
110									100-110			
120									110-120			
130									120-130			
140									130-140			
150									140-150			
160									150-160			
170									160-170			
180									170-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 561.13 lm

%lum = 76.7%

%lamp = 76.7%

Conical surface Flux(120deg): 687.83 lm

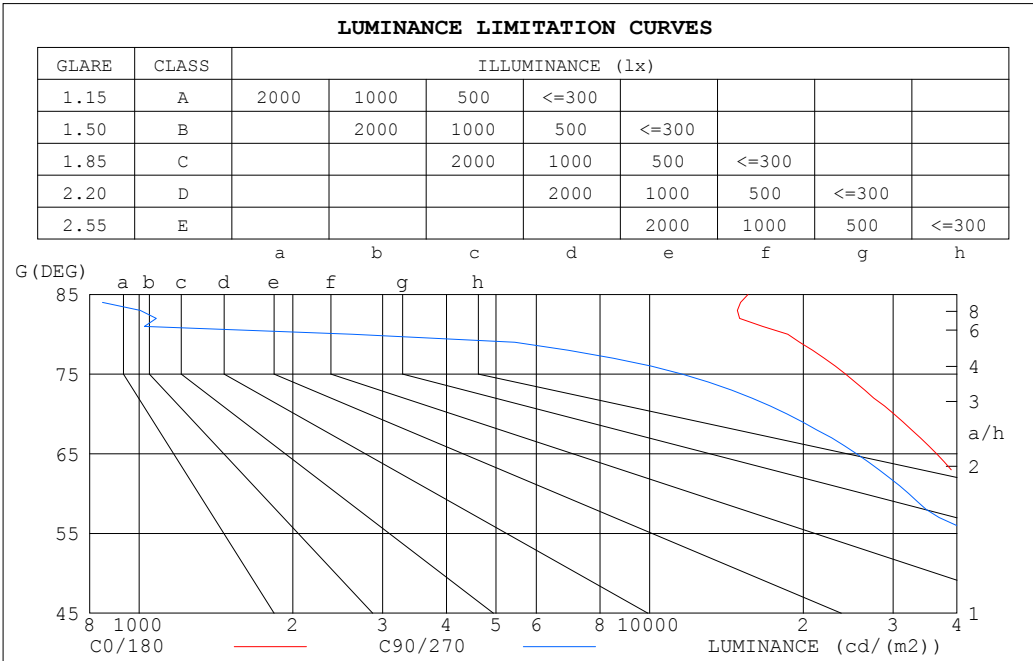
%lum = 94.0%

%lamp = 94.0%

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES



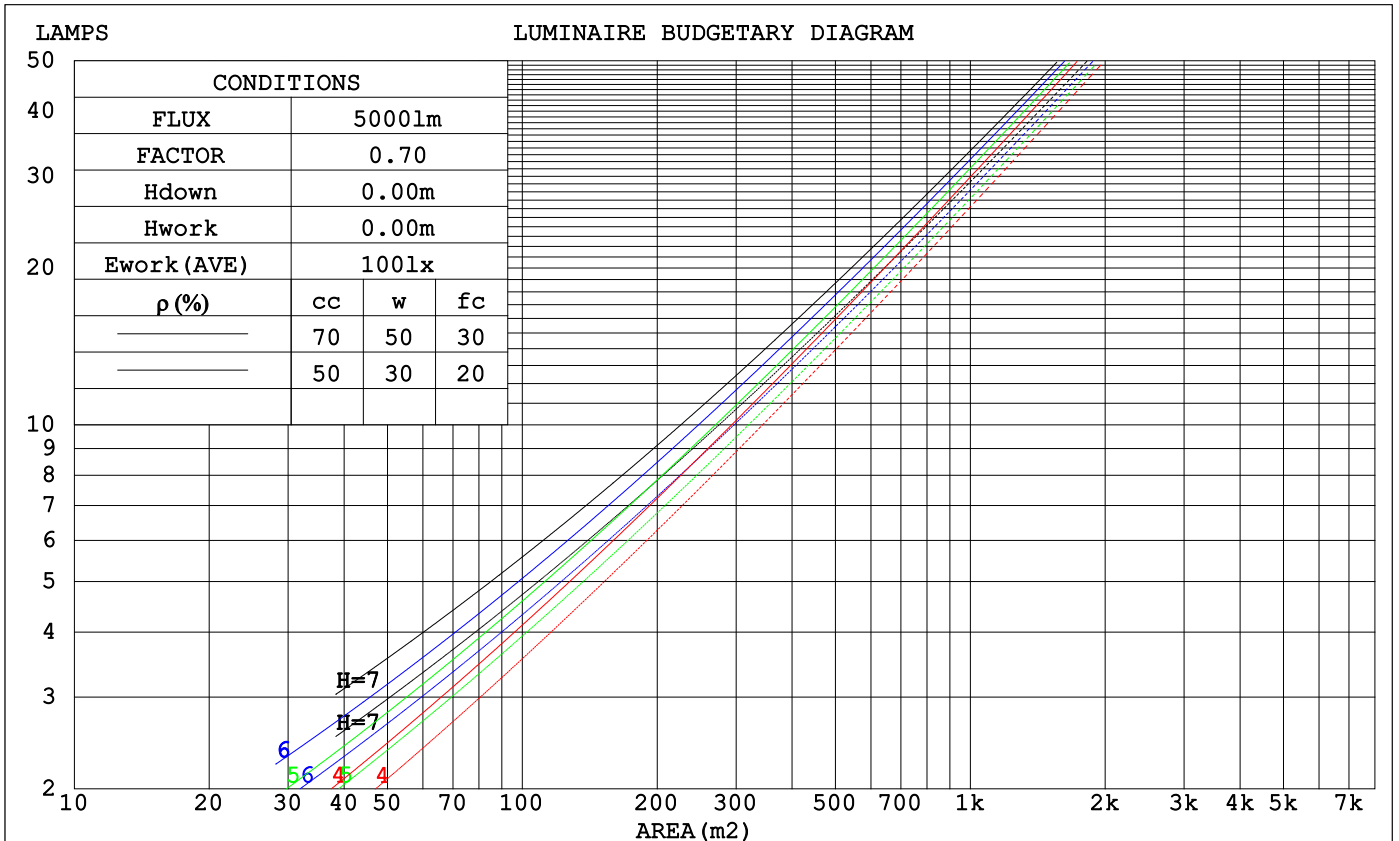
LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	15580	749
80	18657	2617
75	24208	11583
70	30103	18585
65	36500	25454
60	48464	32194
55	67427	43700
50	88675	68091
45	109549	93712

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [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	1.02	1.02	1.02	1.00
1.0	1.08	1.05	1.02	1.06	1.03	1.00	1.02	.99	.97	.98	.96	.94	.94	.93	.92	.90
2.0	.98	.92	.88	.96	.91	.87	.92	.89	.85	.89	.86	.83	.87	.84	.81	.80
3.0	.88	.82	.77	.87	.81	.76	.84	.79	.75	.82	.77	.74	.79	.76	.72	.71
4.0	.80	.73	.68	.79	.72	.67	.77	.71	.66	.75	.70	.66	.73	.68	.65	.63
5.0	.73	.66	.60	.72	.65	.60	.70	.64	.59	.68	.63	.59	.67	.62	.58	.56
6.0	.67	.60	.54	.66	.59	.54	.65	.58	.54	.63	.57	.53	.62	.57	.53	.51
7.0	.62	.54	.49	.61	.54	.49	.60	.53	.49	.58	.53	.48	.57	.52	.48	.46
8.0	.57	.50	.45	.56	.49	.44	.55	.49	.44	.54	.48	.44	.53	.48	.44	.42
9.0	.53	.46	.41	.52	.45	.41	.51	.45	.41	.50	.45	.40	.49	.44	.40	.39
10.0	.49	.42	.38	.49	.42	.37	.48	.42	.37	.47	.41	.37	.46	.41	.37	.35



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [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	.228	.130	.041	.222	.126	.040	.209	.120	.038	.197	.114	.036	.186	.108	.035	
2.0	.222	.122	.037	.216	.119	.037	.205	.114	.035	.195	.110	.034	.186	.105	.033	
3.0	.212	.113	.034	.207	.111	.033	.197	.107	.032	.188	.103	.032	.180	.100	.031	
4.0	.201	.104	.031	.196	.103	.030	.188	.100	.030	.180	.097	.029	.173	.094	.029	
5.0	.190	.097	.028	.186	.095	.028	.178	.093	.027	.171	.090	.027	.165	.088	.026	
6.0	.179	.090	.026	.176	.089	.026	.169	.087	.025	.163	.085	.025	.157	.083	.025	
7.0	.170	.084	.024	.166	.083	.024	.160	.081	.023	.155	.079	.023	.150	.078	.023	
8.0	.161	.078	.022	.158	.078	.022	.152	.076	.022	.147	.075	.022	.143	.073	.021	
9.0	.152	.074	.021	.150	.073	.020	.145	.072	.020	.141	.070	.020	.136	.069	.020	
10.0	.145	.069	.019	.143	.069	.019	.138	.068	.019	.134	.067	.019	.130	.065	.019	

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	.175	.157	.141	.149	.135	.121	.102	.093	.084	.059	.054	.049	.019	.017	.016	
2.0	.163	.132	.106	.140	.114	.092	.096	.079	.064	.055	.046	.038	.018	.015	.012	
3.0	.153	.114	.083	.131	.098	.072	.090	.068	.050	.052	.040	.030	.017	.013	.010	
4.0	.145	.100	.066	.124	.086	.057	.086	.060	.040	.049	.035	.024	.016	.011	.008	
5.0	.137	.089	.053	.118	.077	.046	.081	.054	.033	.047	.032	.019	.015	.010	.006	
6.0	.131	.080	.044	.112	.069	.038	.077	.049	.027	.045	.029	.016	.014	.009	.005	
7.0	.124	.073	.037	.107	.063	.032	.074	.044	.023	.043	.026	.014	.014	.009	.005	
8.0	.119	.067	.032	.102	.058	.028	.071	.041	.020	.041	.024	.012	.013	.008	.004	
9.0	.113	.062	.028	.098	.054	.024	.068	.038	.017	.039	.022	.010	.013	.007	.003	
10.0	.108	.058	.024	.093	.050	.021	.065	.035	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [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	26.9	28.2	27.2	28.4	28.6	25.8	27.1	26.1	27.2	27.4
3H	27.2	28.4	27.5	28.6	28.8	25.9	27.1	26.2	27.3	27.5
4H	27.3	28.4	27.6	28.6	28.9	25.9	27.0	26.2	27.2	27.5
6H	27.4	28.4	27.7	28.6	28.9	25.9	26.9	26.2	27.1	27.4
8H	27.3	28.3	27.7	28.6	28.9	25.8	26.8	26.1	27.0	27.3
12H	27.3	28.2	27.7	28.5	28.8	25.8	26.7	26.1	27.0	27.3
4H 2H	27.0	28.0	27.3	28.3	28.5	26.0	27.0	26.3	27.3	27.5
3H	27.4	28.3	27.7	28.6	28.9	26.2	27.1	26.5	27.4	27.7
4H	27.6	28.4	27.9	28.7	29.0	26.2	27.1	26.6	27.4	27.7
6H	27.7	28.4	28.0	28.7	29.1	26.2	26.9	26.5	27.2	27.6
8H	27.7	28.3	28.1	28.7	29.1	26.1	26.8	26.5	27.2	27.5
12H	27.6	28.3	28.1	28.6	29.0	26.1	26.7	26.5	27.1	27.5
8H 4H	27.5	28.2	27.9	28.6	28.9	26.2	26.9	26.6	27.3	27.6
6H	27.6	28.2	28.1	28.6	29.0	26.2	26.7	26.6	27.1	27.6
8H	27.7	28.2	28.1	28.6	29.0	26.1	26.6	26.6	27.0	27.5
12H	27.7	28.1	28.1	28.5	29.0	26.1	26.5	26.6	27.0	27.4
12H 4H	27.5	28.1	27.9	28.5	28.9	26.2	26.8	26.6	27.2	27.6
6H	27.6	28.1	28.1	28.5	29.0	26.1	26.6	26.6	27.1	27.5
8H	27.6	28.0	28.1	28.5	29.0	26.1	26.5	26.6	27.0	27.4
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.9 / - 1.2					+ 1.4 / - 2.2				
1.5H	+ 0.5 / - 0.7					+ 0.9 / - 1.4				
2.0H	+ 2.1 / - 2.2					+ 2.7 / - 2.6				

CIE Pub.117, 731.9 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -1.1)
 Area: 0.0024 m2

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

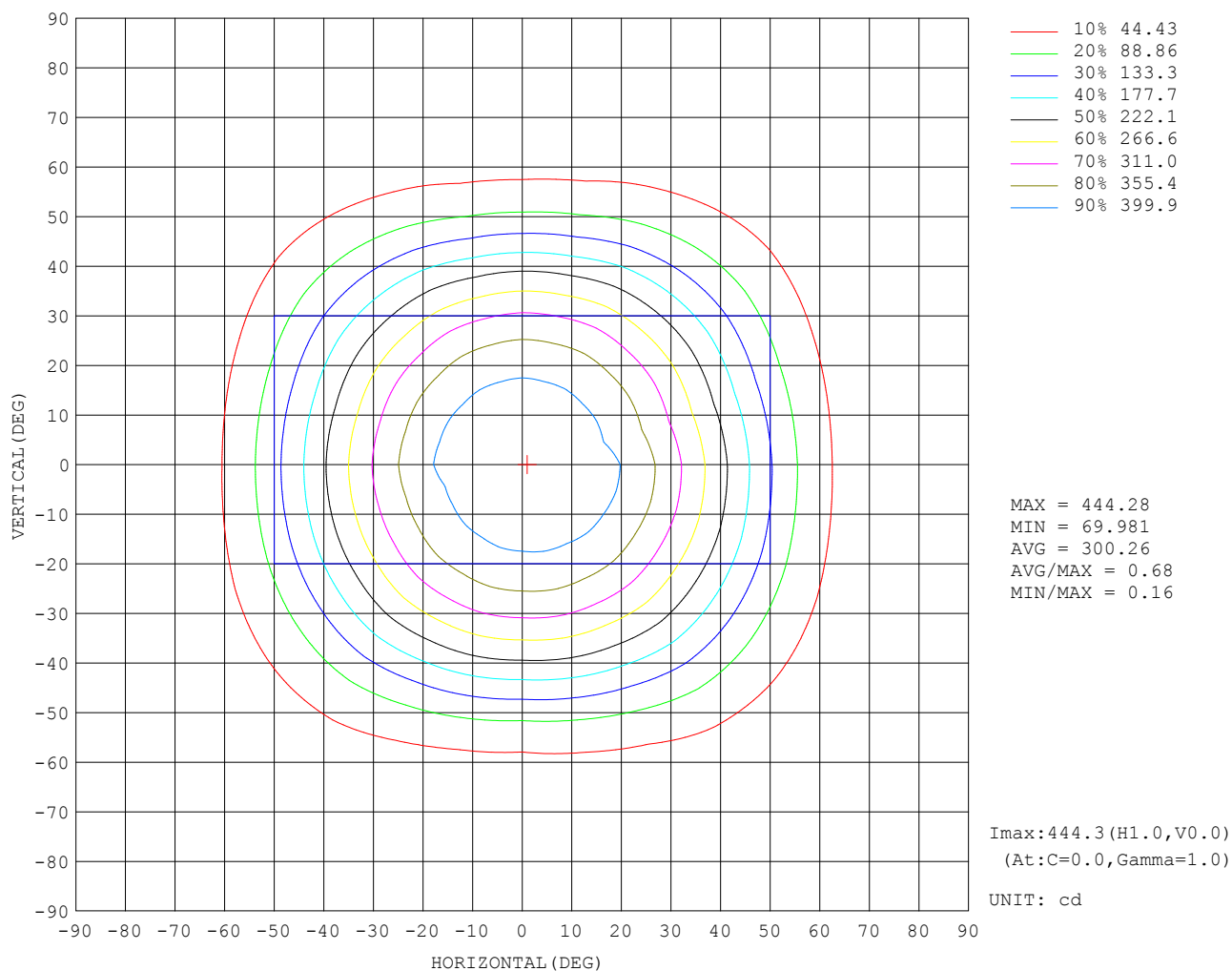
UTILIZATION FACTORS TABLE

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	71	61	56	70	61	55	69	61	55	50
0.80	80	71	66	79	71	65	78	70	65	60
1.00	88	79	74	87	79	74	85	79	73	68
1.25	94	86	81	92	85	80	90	84	80	74
1.50	98	91	86	96	90	85	94	88	84	78
2.00	103	97	92	101	96	91	98	93	90	83
2.50	105	100	95	104	98	95	100	96	93	86
3.00	108	103	99	106	101	98	102	99	96	88
4.00	110	106	103	108	105	102	104	102	99	91
5.00	112	109	106	110	107	104	106	103	101	93
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: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

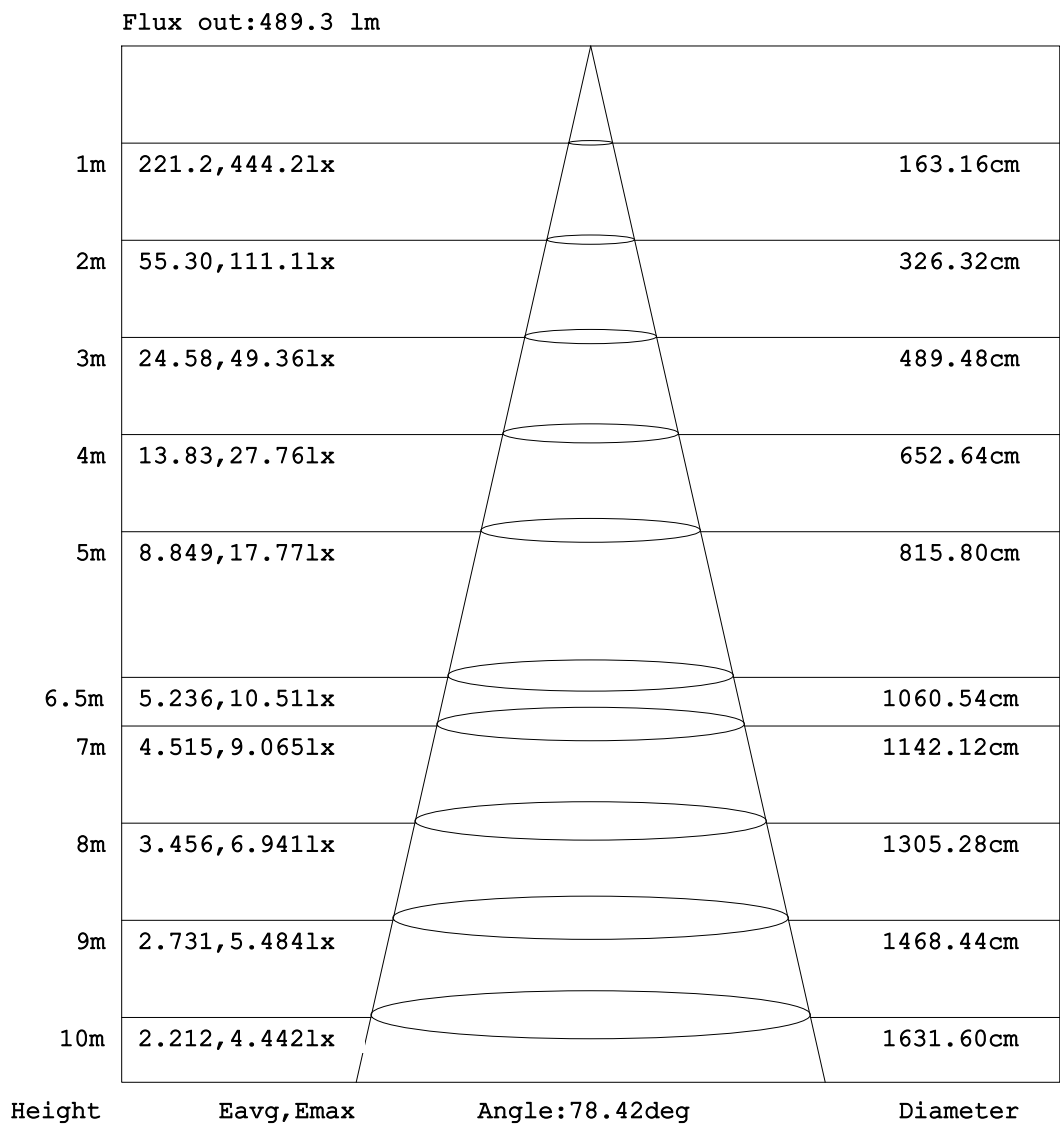
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

AAI Figure

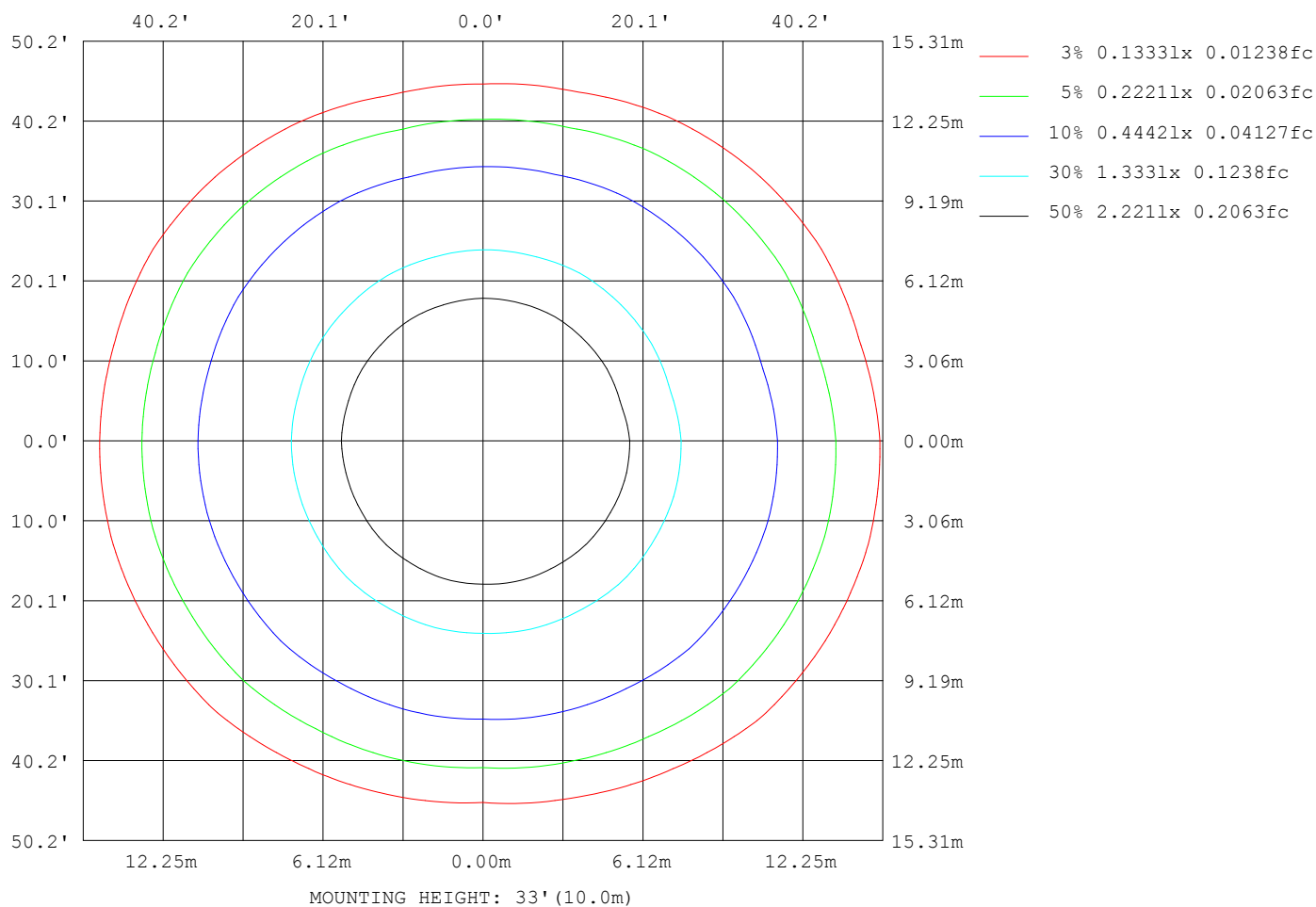


Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

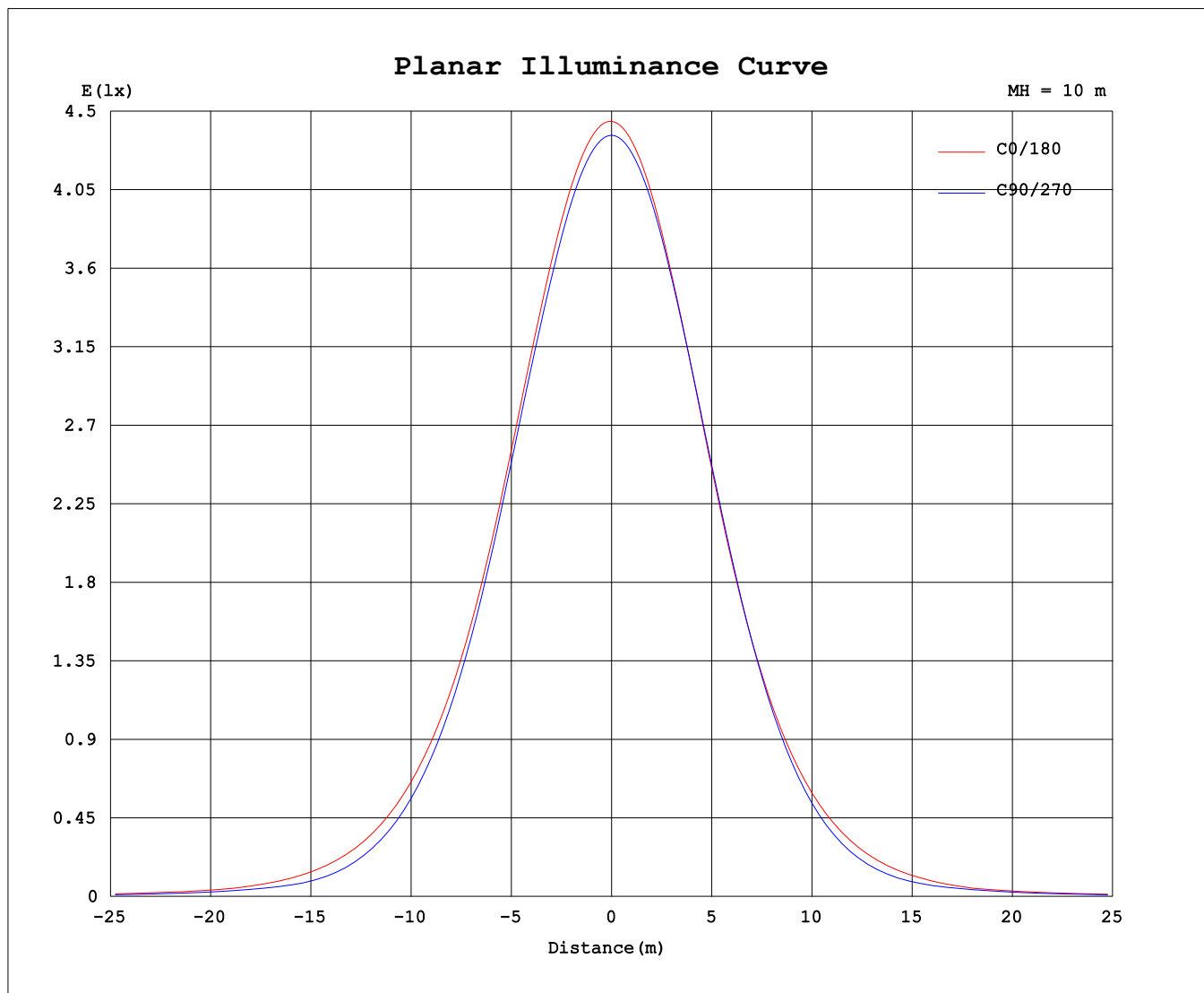
ISOLUX DIAGRAM



C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 15.0DEG
Test Speed: 10.0deg/s
Temperature: 25.3°C
Operators: DAMIN
Test Date: 2023-08-16

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
Humidity: 65.0%
Test Distance: 9.000m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--1

UNIT: cd

γ (DEG)\C (DEG)	UNIT: cd																		
	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	444	442	441	439	438	437	436	435	435	434	433	433	444	442	441	439	438	437	436
5	442	441	439	437	436	435	434	433	432	431	430	430	441	438	437	436	435	434	434
10	435	433	431	430	428	427	425	424	423	422	421	421	431	428	427	426	426	425	425
15	421	420	417	416	413	412	410	409	407	407	405	405	413	410	410	409	410	409	410
20	399	398	396	395	392	391	388	388	385	384	382	382	389	385	385	384	387	386	388
25	369	369	366	366	363	362	359	358	355	354	351	350	355	351	352	351	354	354	357
30	330	331	328	328	324	323	319	319	316	316	311	311	314	309	310	310	314	313	317
35	284	286	283	283	277	275	270	271	269	270	266	266	267	262	264	263	265	264	266
40	236	238	235	235	226	222	216	217	217	220	217	218	218	214	215	213	213	208	211
45	186	189	186	184	173	166	159	161	163	168	167	168	168	165	166	163	159	151	151
50	137	140	137	134	121	112	105	108	112	119	119	121	121	118	119	114	108	97.5	97.2
55	92.8	95.1	92.8	88.7	76.3	66.5	60.2	64.3	69.8	77.3	78.6	80.4	79.8	77.9	78.4	73.2	66.2	57.4	56.5
60	58.2	59.5	57.3	54.1	44.5	39.5	38.6	38.5	41.7	47.8	48.9	50.3	47.4	46.7	48.4	44.2	39.1	37.6	36.9
65	37.0	37.1	37.3	33.6	29.9	26.8	25.8	26.0	28.3	30.9	33.7	32.9	31.2	31.4	31.1	29.8	26.8	25.4	24.9
70	24.7	25.0	25.3	22.2	18.6	16.2	15.3	15.6	17.3	20.1	22.7	21.8	20.2	19.9	19.5	18.7	16.6	15.3	15.1
75	15.0	15.2	14.6	12.7	9.75	7.88	7.20	7.39	8.70	11.1	13.1	12.8	11.6	11.0	10.2	9.69	8.42	7.42	7.30
80	7.78	7.37	6.19	4.71	2.83	1.69	1.09	1.27	2.24	3.64	5.35	5.84	5.07	4.16	3.14	2.79	2.33	1.54	1.43
85	3.26	2.02	0.43	0.20	0.20	0.18	0.16	0.14	0.13	0.13	0.14	1.26	2.22	0.81	0.21	0.22	0.34	0.36	0.37
90	0.26	0.17	0.06	0.03	0.02	0.01	0.01	0.01	0.01	0.02	0.03	0.08	0.11	0.23	0.10	0.08	0.07	0.05	0.05

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature:25.3°C
 Operators:DAMIN
 Test Date:2023-08-16

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity:65.0%
 Test Distance:9.000m [K=1.0000]
 Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Table--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345													
0	435	435	434	433	433													
5	433	432	432	431	430													
10	424	424	424	423	422													
15	409	410	409	409	408													
20	387	388	387	388	386													
25	357	359	357	358	356													
30	317	320	318	319	317													
35	267	273	272	274	272													
40	212	221	223	226	224													
45	154	166	171	176	175													
50	101	114	121	127	127													
55	60.3	71.0	78.9	85.1	85.6													
60	38.6	43.2	48.7	53.4	53.8													
65	26.5	28.9	32.6	35.2	35.8													
70	16.2	18.5	21.8	24.2	24.1													
75	8.14	9.97	12.7	14.5	14.5													
80	2.11	3.14	5.16	6.60	6.96													
85	0.39	0.39	0.34	0.64	2.26													
90	0.05	0.06	0.08	0.10	0.22													

C Range: 0 - 360DEG
 C Interval: 15.0DEG
 Test Speed: 10.0deg/s
 Temperature: 25.3°C
 Operators: DAMIN
 Test Date: 2023-08-16
 γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-3000H_V1 SYSTEM V2.00.463
 Humidity: 65.0%
 Test Distance: 9.000m [K=1.0000]
 Remarks: