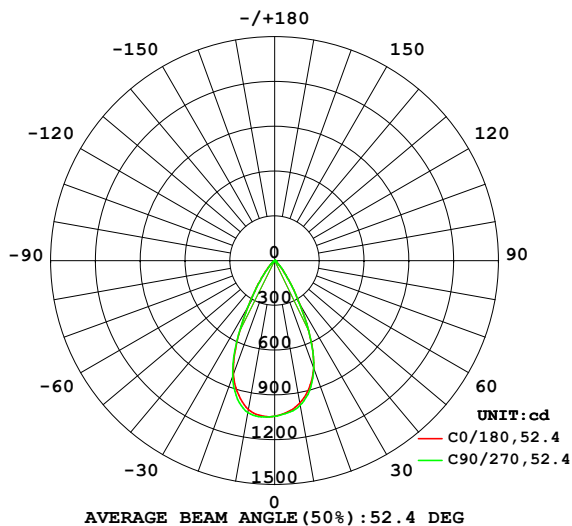


LUMINAIRE PHOTOMETRIC TEST REPORT

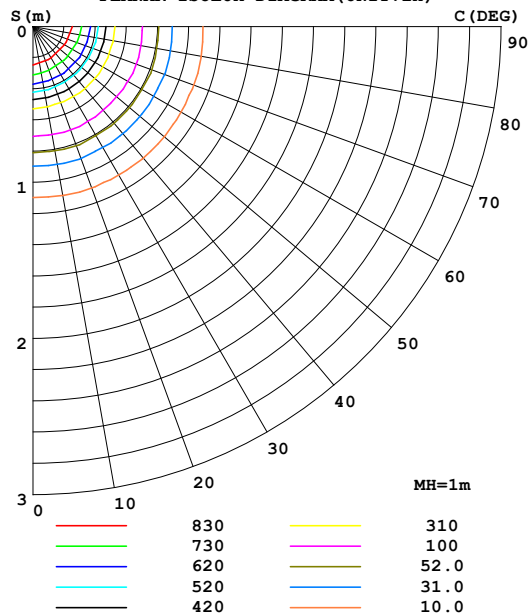
Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 80.13 lm/W
MODEL		I _{max} (cd)	1051	S/MH(C0/180)		0.79
NOMINAL POWER(W)	10	LOR(%)	100.0	S/MH(C90/270)		0.79
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	792.45	η UP,DN(C0-180)		0.0,49.0
NOMINAL FLUX(lm)	792.454	CIE CLASS	DIRECT	η UP,DN(C180-360)		0.0,51.0
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM		0.75
TEST VOLTAGE(V)	240.23	η down (%)	100.0	CIBSE SHR MAX		0.80

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



PLANAR ISOLUX DIAGRAM (UNIT: lx)



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [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	970.1	949.7	985.6	1011	1013	1013	1034	1006	0- 10	97.58	97.58	12.3,12.3
20	766.0	734.3	767.5	794.1	809.7	801.2	825.0	791.9	10- 20	254.3	351.9	44.4,44.4
30	341.1	333.7	342.0	352.5	357.5	355.6	360.3	350.6	20- 30	260.1	611.9	77.2,77.2
40	96.20	95.00	94.90	97.51	96.88	95.63	96.40	96.88	30- 40	122.2	734.1	92.6,92.6
50	22.83	23.13	22.06	22.54	22.92	23.35	22.90	22.23	40- 50	38.79	772.9	97.5,97.5
60	8.075	8.159	8.236	8.250	8.244	8.241	8.108	7.930	50- 60	12.32	785.2	99.1,99.1
70	3.043	3.104	3.210	3.210	3.157	3.098	3.093	2.994	60- 70	5.197	790.4	99.7,99.7
80	0.6900	0.7099	0.6796	0.7490	0.7243	0.6342	0.5668	0.6287	70- 80	1.876	792.3	100,100
90	0.0281	0.0202	0.0306	0.0226	0.0237	0.0205	0.0235	0.0203	80- 90	0.1808	792.5	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): 759.43 lm

%lum = 95.8%

%lamp = 95.8%

Conical surface Flux(120deg): 785.2 lm

%lum = 99.1%

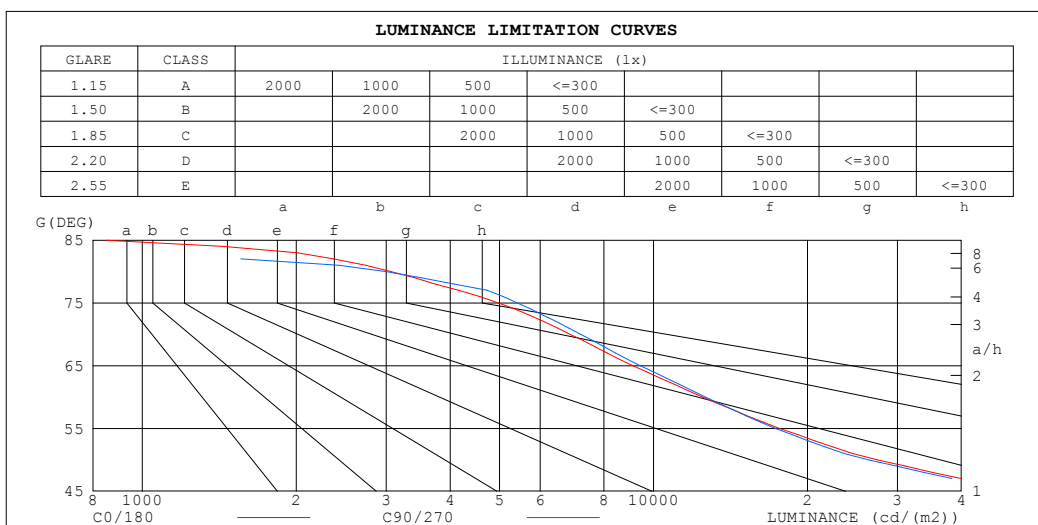
%lamp = 99.1%

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2023-12-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



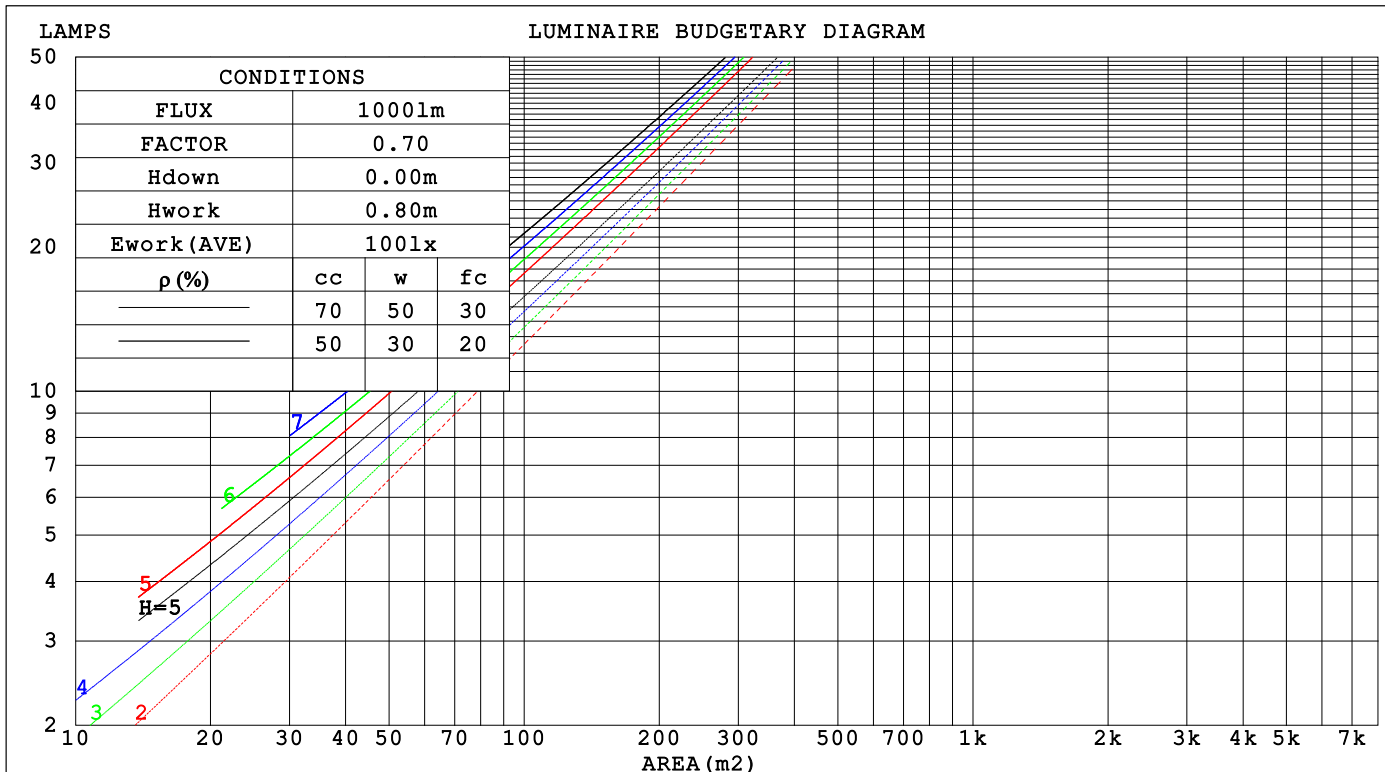
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-12-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495		
Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

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															



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz			UTHDi:0.18% ITHDi:18.60% KDisp:0.9495			Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D			TYPE:			WEIGHT:		
SPEC.:			DIM.:			SERIAL No.:		
MFR.: Norming Lighting			SUR.: 41mm			Shielding Angle:		

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	.174	.099	.031	.167	.095	.030	.155	.089	.028	.143	.082	.026	.132	.077	.025		
2.0	.166	.091	.028	.160	.088	.027	.150	.083	.026	.140	.079	.025	.131	.074	.023		
3.0	.158	.084	.025	.153	.082	.025	.144	.078	.024	.136	.074	.023	.128	.071	.022		
4.0	.150	.078	.023	.146	.076	.023	.138	.073	.022	.131	.070	.021	.124	.068	.021		
5.0	.143	.073	.021	.139	.071	.021	.132	.069	.020	.126	.067	.020	.120	.064	.019		
6.0	.136	.068	.020	.133	.067	.019	.127	.065	.019	.122	.063	.019	.116	.061	.018		
7.0	.130	.064	.018	.127	.063	.018	.122	.062	.018	.117	.060	.017	.113	.058	.017		
8.0	.124	.061	.017	.122	.060	.017	.117	.059	.017	.113	.057	.017	.109	.056	.016		
9.0	.119	.058	.016	.117	.057	.016	.113	.056	.016	.109	.055	.016	.105	.053	.015		
10.0	.114	.055	.015	.112	.054	.015	.109	.053	.015	.105	.052	.015	.102	.051	.015		

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	.171	.157	.145	.146	.135	.125	.100	.093	.086	.058	.054	.050	.018	.017	.016		
2.0	.155	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013		
3.0	.143	.114	.090	.122	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011		
4.0	.132	.099	.073	.114	.085	.063	.078	.059	.045	.045	.035	.026	.015	.011	.009		
5.0	.124	.087	.060	.106	.075	.052	.073	.053	.037	.042	.031	.022	.014	.010	.007		
6.0	.116	.078	.050	.100	.067	.044	.069	.047	.031	.040	.028	.018	.013	.009	.006		
7.0	.109	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005		
8.0	.104	.064	.037	.089	.055	.032	.062	.039	.023	.036	.023	.013	.012	.008	.004		
9.0	.099	.059	.032	.085	.051	.028	.059	.036	.020	.034	.021	.012	.011	.007	.004		
10.0	.094	.054	.028	.081	.047	.024	.056	.033	.017	.033	.020	.010	.011	.006	.003		

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm										
NAME: MD10-10-XX-04 2700K RA90 50D					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.: Norming Lighting					SUR.: 41mm			Shielding Angle:		
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	21.0	21.9	21.2	22.1	22.3	21.0	21.9	21.2	22.1	22.2
3H	20.9	21.8	21.2	22.0	22.2	20.9	21.7	21.2	21.9	22.1
4H	20.9	21.7	21.2	21.9	22.1	20.8	21.6	21.1	21.9	22.1
6H	20.8	21.5	21.1	21.8	22.0	20.8	21.5	21.1	21.8	22.0
8H	20.8	21.5	21.1	21.7	22.0	20.7	21.4	21.0	21.7	22.0
12H	20.7	21.4	21.0	21.7	21.9	20.7	21.4	21.0	21.6	21.9
4H 2H	20.8	21.6	21.1	21.9	22.1	20.8	21.6	21.1	21.8	22.0
3H	20.8	21.5	21.1	21.7	22.0	20.7	21.4	21.1	21.7	22.0
4H	20.7	21.3	21.1	21.6	21.9	20.7	21.3	21.0	21.6	21.9
6H	20.6	21.2	21.0	21.5	21.9	20.6	21.2	21.0	21.5	21.8
8H	20.6	21.1	21.0	21.5	21.8	20.6	21.1	21.0	21.4	21.8
12H	20.5	21.0	21.0	21.4	21.8	20.5	21.0	20.9	21.4	21.7
8H 4H	20.6	21.1	21.0	21.5	21.8	20.6	21.1	21.0	21.4	21.8
6H	20.5	20.9	20.9	21.3	21.7	20.5	20.9	20.9	21.3	21.7
8H	20.5	20.8	20.9	21.3	21.7	20.4	20.8	20.9	21.2	21.7
12H	20.4	20.7	20.9	21.2	21.6	20.4	20.7	20.9	21.1	21.6
12H 4H	20.5	21.0	21.0	21.4	21.8	20.5	21.0	20.9	21.4	21.7
6H	20.5	20.8	20.9	21.3	21.7	20.4	20.8	20.9	21.2	21.7
8H	20.4	20.7	20.9	21.2	21.6	20.4	20.7	20.9	21.1	21.6
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.8 / - 5.9					+ 2.8 / - 5.8				
1.5H	+ 4.6 / - 4.8					+ 4.6 / - 4.8				
2.0H	+ 4.6 / - 3.5					+ 4.5 / - 3.3				

CIE Pub.117, 792.5 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -0.8)
Area: 0.0013 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

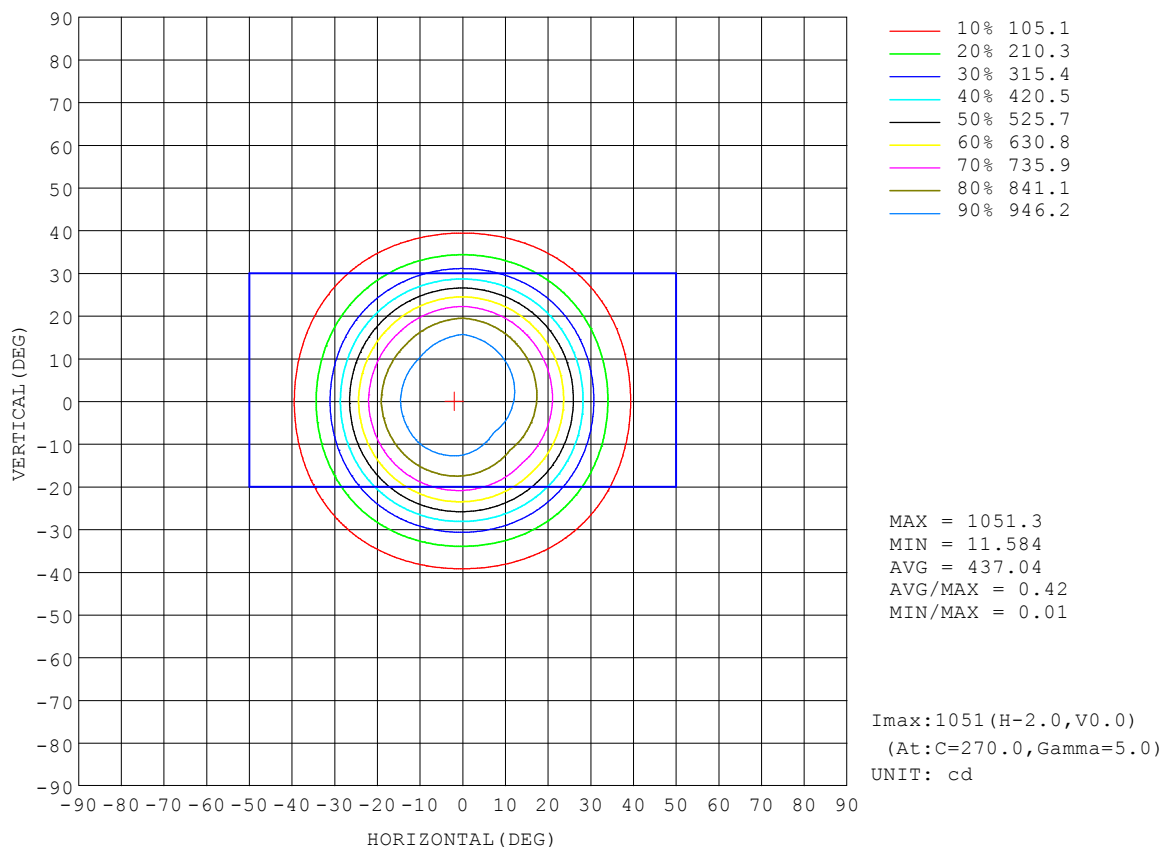
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	87	80	77	86	80	77	86	80	76	73
0.80	94	89	85	94	88	85	93	88	84	81
1.00	99	93	90	98	93	89	97	93	89	85
1.25	103	98	94	102	97	94	100	96	93	89
1.50	106	101	98	105	100	97	102	99	96	92
2.00	108	104	101	107	103	100	104	101	99	94
2.50	110	106	103	109	105	102	105	103	101	95
3.00	112	108	106	110	107	104	107	104	102	96
4.00	114	111	109	112	109	107	108	106	105	98
5.00	115	113	111	113	111	109	109	107	106	99
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: DAMIN
 Test Date: 2023-12-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity: 65.0%
 Test Distance: 3.090m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

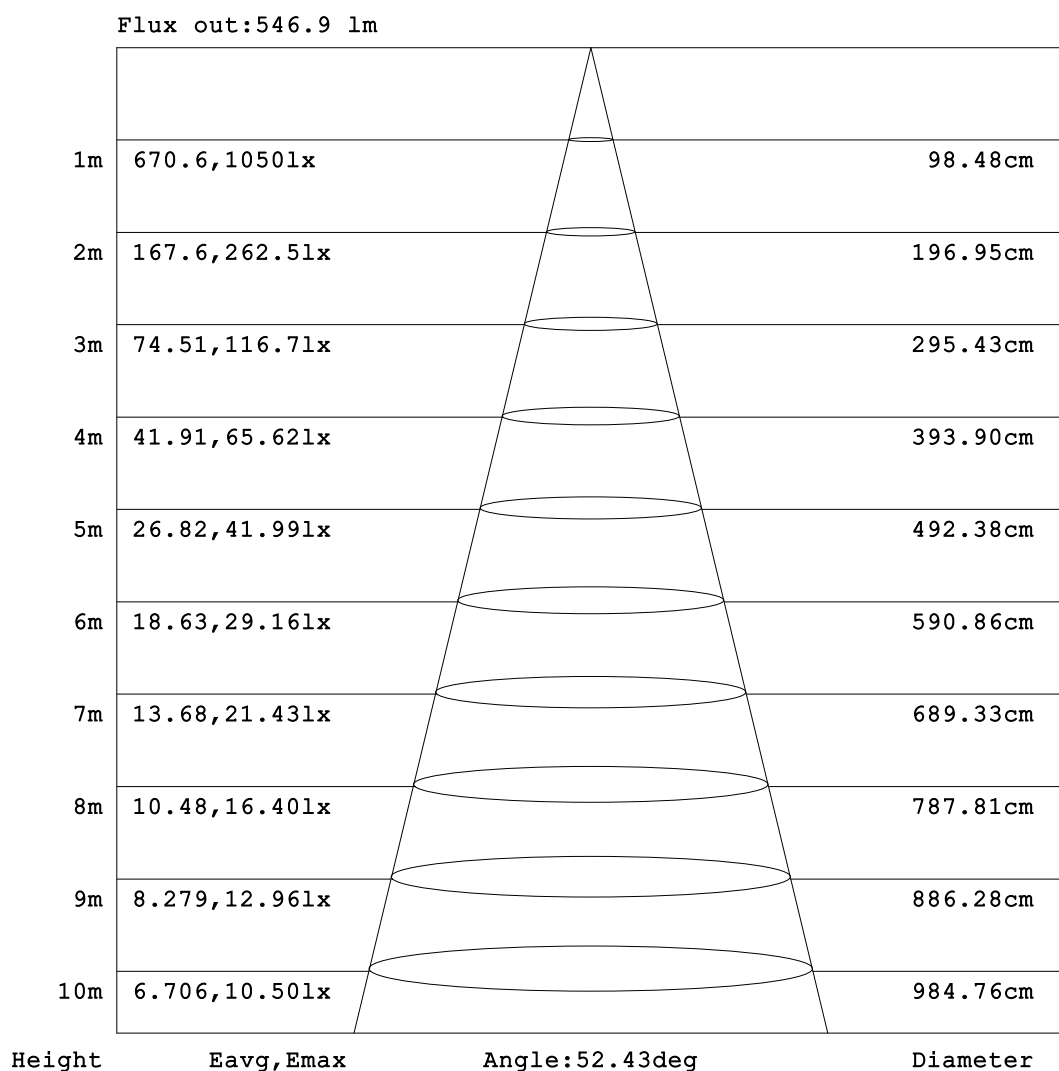


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

AAI Figure

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



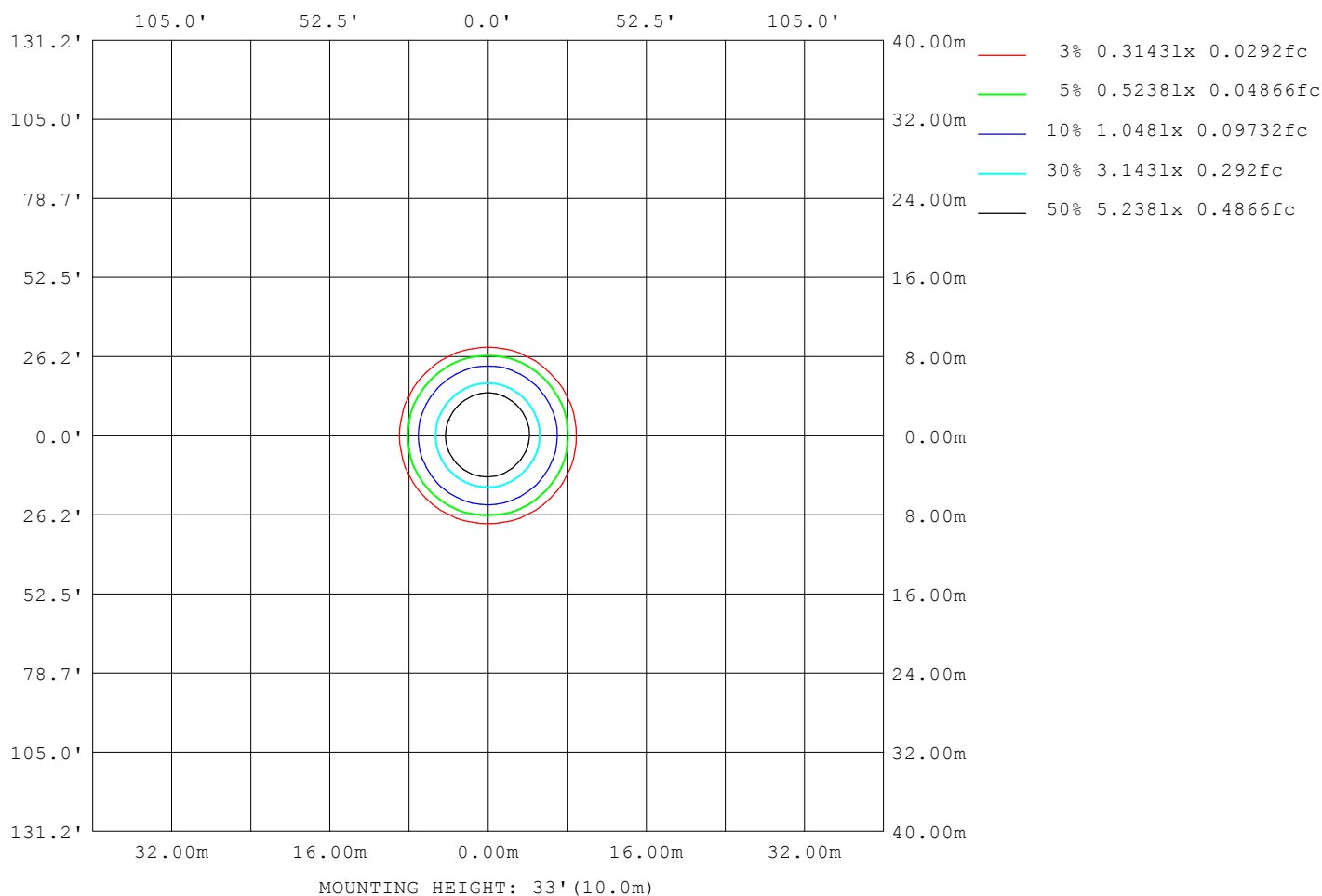
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2023-12-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
 Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
 Humidity:65.0%
 Test Distance:3.090m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:240.3V I:0.0441A P:9.9W PF:0.9329 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.60% KDisp:0.9495 Lamp Flux:792.454x1 lm		
NAME: MD10-10-XX-04 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 41mm	Shielding Angle:

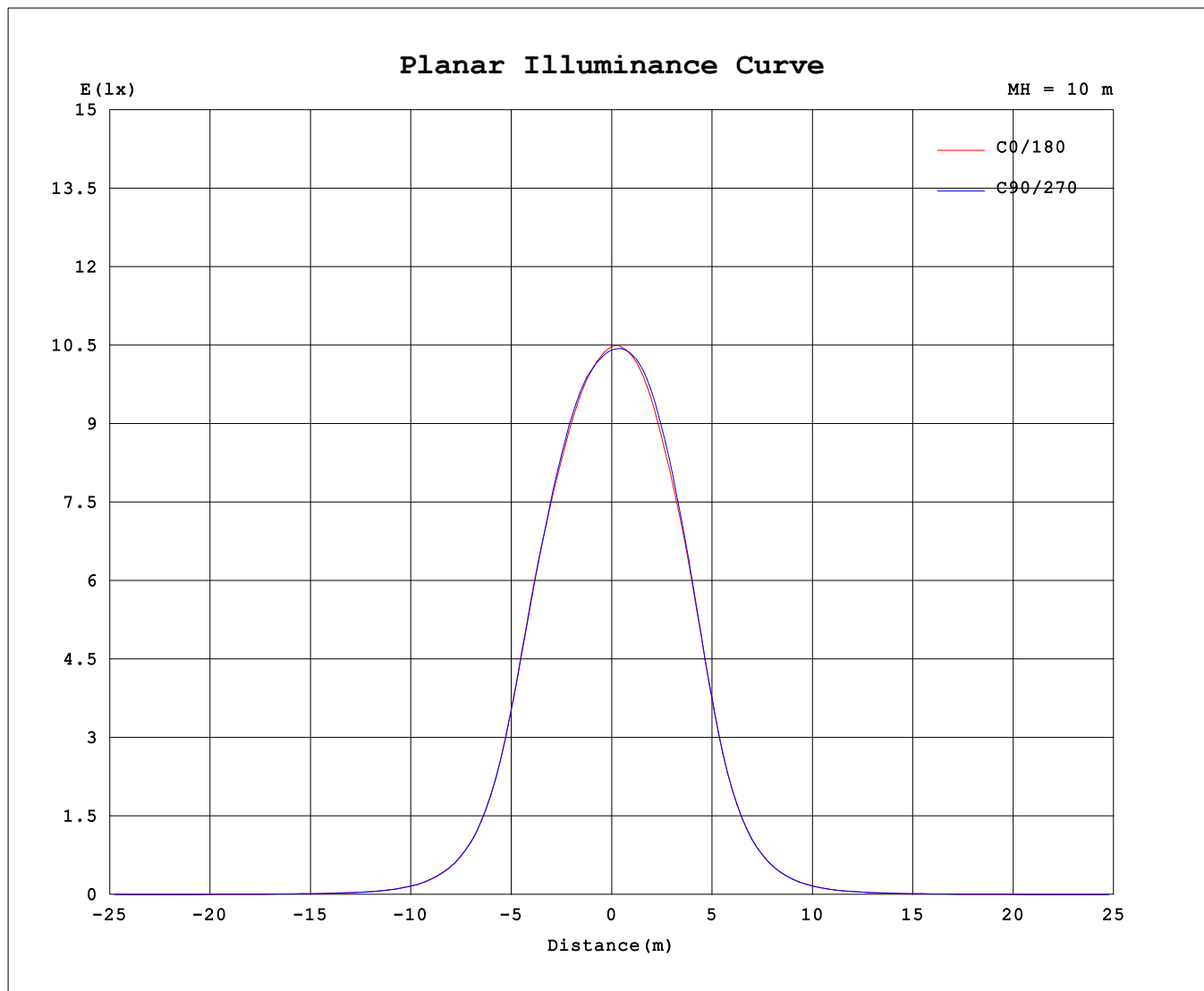
AvgL	cd/m2
L_0~180 (65) av	9228
L_0~180 (75) av	5100
L_0~180 (85) av	931
L_90~270 (65) av	9327
L_90~270 (75) av	5270
L_90~270 (85) av	263
L_45 (65) av	9205
L_45 (75) av	5130
L_45 (85) av	215

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: DAMIN
Test Date: 2023-12-21

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity: 65.0%
Test Distance: 3.090m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks:

```

Photometric Data Table [cd]

G/C	0.0	45.0	90.0	135.0	180.0	225.0	270.0	315.0
0.0	1043	1043	1043	1043	1043	1043	1043	1043
3.0	1029	1025	1032	1042	1046	1049	1050	1040
6.0	1010	1001	1018	1037	1040	1045	1050	1033
9.0	982.4	964.6	996.4	1020	1023	1025	1041	1015
12.0	940.9	917.1	957.9	985.9	986.2	985.2	1012	979.4
15.0	887.4	858.8	902.8	931.2	933.8	931.5	962.0	925.0
18.0	821.1	789.3	828.4	856.5	867.2	860.7	888.4	852.2
21.0	733.5	703.0	733.2	758.3	774.9	766.1	788.0	756.2
24.0	612.6	589.7	610.9	631.3	647.6	640.9	655.1	628.8
27.0	472.3	459.4	473.5	488.2	498.4	494.9	503.1	484.7
30.0	341.1	333.7	342.0	352.5	357.5	355.6	360.3	350.6
33.0	237.4	233.5	237.4	245.5	246.6	245.2	248.3	244.0
36.0	162.0	160.2	161.8	167.6	167.2	165.3	167.6	165.6
39.0	108.8	108.5	108.0	112.2	111.4	110.4	111.1	110.0
42.0	71.96	72.38	70.90	72.75	72.88	73.56	72.47	71.65
45.0	46.88	47.62	45.69	46.41	47.19	48.22	47.12	45.83
48.0	30.42	30.94	29.41	29.96	30.56	31.26	30.66	29.69
51.0	19.97	20.59	19.35	20.17	20.47	20.35	20.36	19.44
54.0	14.57	14.64	14.29	14.59	14.72	14.82	14.53	14.30
57.0	10.74	10.82	10.74	10.90	10.94	10.95	10.78	10.56
60.0	8.075	8.159	8.236	8.250	8.244	8.241	8.108	7.930
63.0	6.067	6.137	6.272	6.254	6.234	6.201	6.129	5.961
66.0	4.515	4.578	4.710	4.700	4.667	4.619	4.589	4.441
69.0	3.375	3.435	3.550	3.544	3.491	3.438	3.428	3.319
72.0	2.444	2.506	2.600	2.596	2.544	2.483	2.482	2.403
75.0	1.667	1.733	1.827	1.825	1.765	1.699	1.719	1.647
78.0	1.008	1.054	1.106	1.168	1.098	1.021	0.9402	0.9851
81.0	0.5535	0.5468	0.4942	0.5765	0.5791	0.4810	0.3889	0.4683
84.0	0.1944	0.0712	0.0347	0.0938	0.2390	0.0675	0.0277	0.0549
87.0	0.0313	0.0212	0.0283	0.0203	0.0307	0.0193	0.0245	0.0174
90.0	0.0281	0.0202	0.0306	0.0226	0.0237	0.0205	0.0235	0.0203

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2023-12-21

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-SPEX500_V1 SYSTEM V2.00.453
Humidity:65.0%
Test Distance:3.090m [K=1.0000]
Remarks: