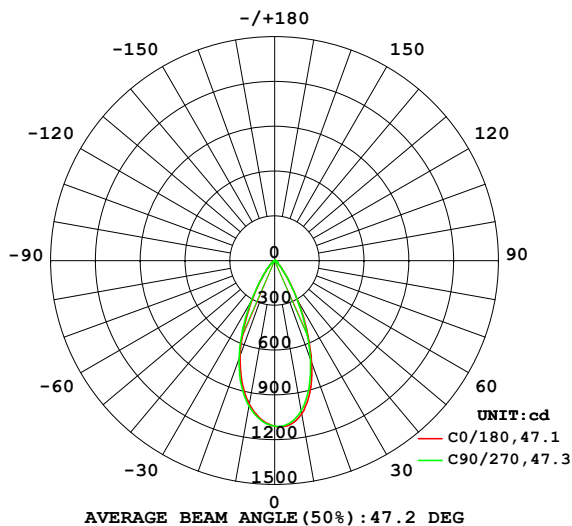


LUMINAIRE PHOTOMETRIC TEST REPORT

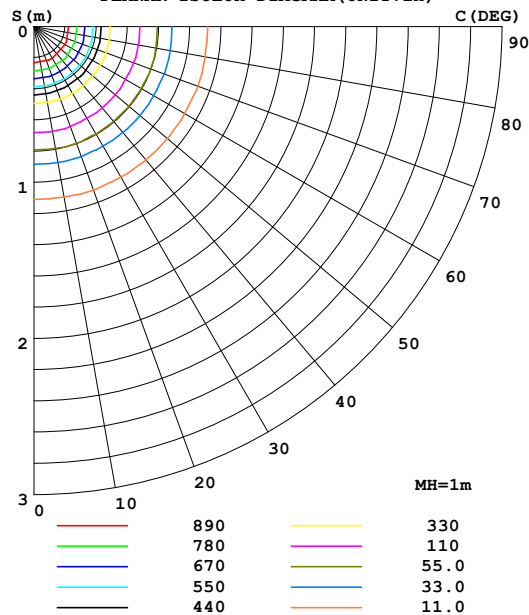
Test:U:240.3V I:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421 Lamp Flux:749.963x1 lm		
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA				Eff: 81.00 lm/W
MODEL		I _{max} (cd)	1115	S/MH(C0/180)	0.73	
NOMINAL POWER(W)	9	LOR(%)	100.0	S/MH(C90/270)	0.75	
RATED VOLTAGE(V)	240	TOTAL FLUX(lm)	749.96	η UP,DN(C0-180)	0.0,50.3	
NOMINAL FLUX(lm)	749.963	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,49.7	
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	0.75	
TEST VOLTAGE(V)	240.22	η down(%)	100.0	CIBSE SHR MAX	0.75	

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:2024-03-16

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	1043	1044	1023	1000	976.9	971.2	989.5	1018	0- 10	101.1	101.1	13.5,13.5
20	725.7	727.8	703.3	689.2	678.0	680.9	699.2	714.2	10- 20	242.0	343.1	45.8,45.8
30	311.4	314.1	304.4	303.8	304.8	313.2	321.8	316.9	20- 30	226.9	570.1	76,76
40	91.19	93.87	92.51	90.51	89.34	93.82	96.49	93.03	30- 40	112.2	682.3	91,91
50	29.14	30.12	29.79	29.08	28.47	29.20	29.88	28.96	40- 50	41.16	723.4	96.5,96.5
60	10.88	11.12	10.95	11.03	11.07	11.28	11.11	10.90	50- 60	16.54	740.0	98.7,98.7
70	3.961	4.118	4.055	4.103	4.085	4.182	4.124	4.044	60- 70	6.946	746.9	99.6,99.6
80	1.169	1.277	1.164	1.224	1.261	1.261	1.250	1.186	70- 80	2.570	749.5	99.9,99.9
90	0.0186	0.0177	0.0251	0.0132	0.0183	0.0144	0.0177	0.0132	80- 90	0.4926	750.0	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): 707.76 lm

%lum = 94.4%

%lamp = 94.4%

Conical surface Flux(120deg): 739.95 lm

%lum = 98.7%

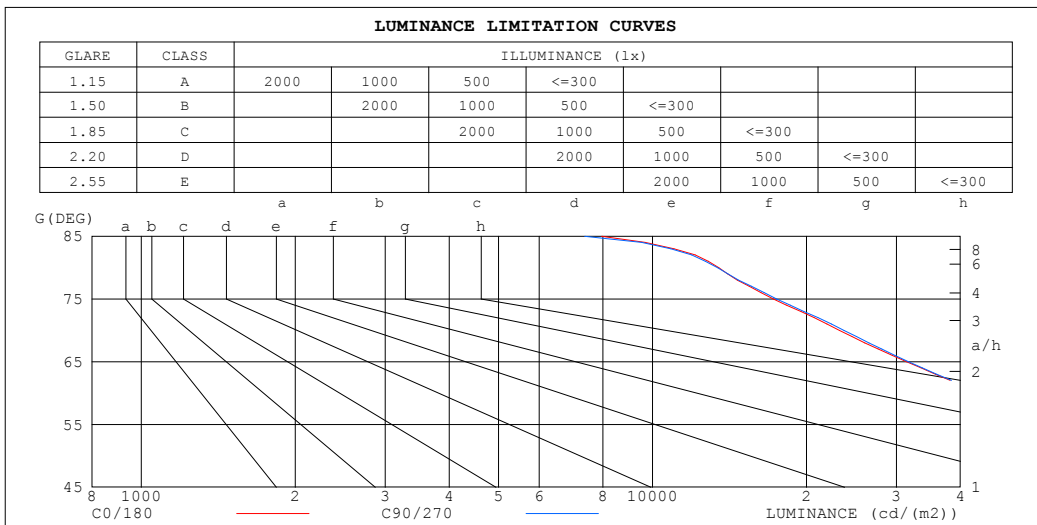
%lamp = 98.7%

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421 Lamp Flux:749.963x1 lm		
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	7951	7363
80	13485	13395
75	17239	17496
70	23195	23697
65	31403	31680
60	43568	43772
55	61574	62533
50	90785	92628
45	141650	144682

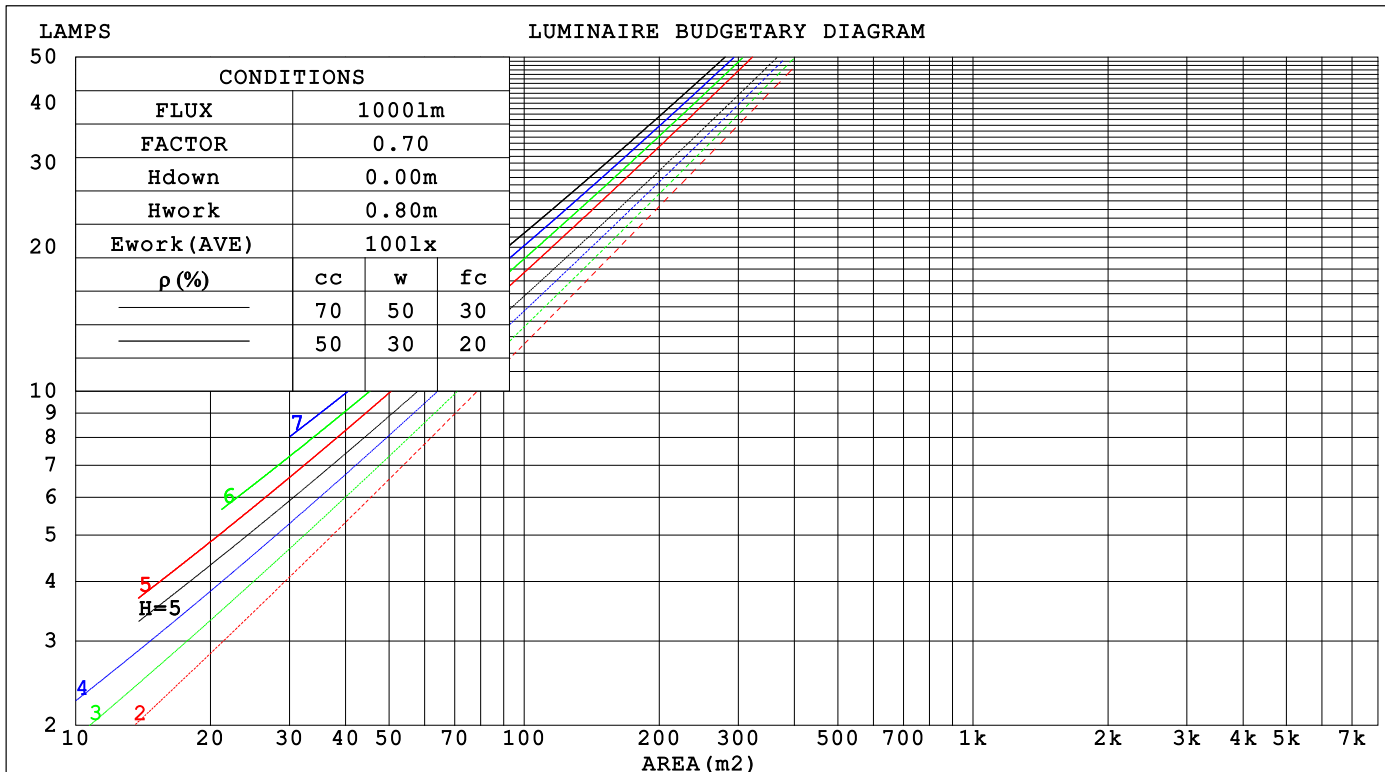
C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421		
Lamp Flux:749.963x1 lm		
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	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:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz			UTHDi:0.18% ITHDi:18.07% KDisp:0.9421			Lamp Flux:749.963x1 lm		
NAME: MD10-09-XX-16 2700K RA90 50D			TYPE:			WEIGHT:		
SPEC.:			DIM.:			SERIAL No.:		
MFR.: Norming Lighting			SUR.: 26mm			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	.176	.100	.032	.169	.096	.031	.156	.090	.029	.145	.084	.027	.134	.078	.025															
2.0	.168	.092	.028	.162	.089	.027	.151	.084	.026	.142	.079	.025	.133	.075	.024															
3.0	.159	.085	.025	.154	.083	.025	.145	.079	.024	.137	.075	.023	.129	.072	.022															
4.0	.151	.078	.023	.147	.077	.023	.139	.074	.022	.132	.071	.021	.125	.068	.021															
5.0	.144	.073	.021	.140	.072	.021	.133	.069	.020	.127	.067	.020	.121	.065	.019															
6.0	.137	.069	.020	.134	.067	.019	.128	.065	.019	.122	.063	.019	.117	.062	.018															
7.0	.130	.064	.018	.128	.064	.018	.122	.062	.018	.117	.060	.018	.113	.059	.017															
8.0	.125	.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	.108	.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	.156	.133	.113	.133	.114	.098	.091	.079	.068	.053	.046	.040	.017	.015	.013	
3.0	.143	.114	.090	.123	.098	.078	.084	.068	.055	.049	.040	.032	.016	.013	.011	
4.0	.133	.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	.110	.070	.043	.094	.061	.037	.065	.043	.026	.038	.025	.016	.012	.008	.005	
8.0	.104	.064	.036	.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:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz UTHDi:0.18% ITHDi:18.07% KDisp:0.9421Lamp Flux:749.963x1 lm										
NAME: MD10-09-XX-16 2700K RA90 50D						TYPE:		WEIGHT:		
SPEC.:						DIM.:		SERIAL No.:		
MFR.: Norming Lighting						SUR.: 26mm		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	24.6	25.6	24.9	25.7	25.9	24.6	25.6	24.9	25.7	25.9
3H	24.6	25.5	24.9	25.6	25.9	24.6	25.4	24.9	25.6	25.8
4H	24.6	25.4	24.8	25.6	25.8	24.6	25.4	24.8	25.6	25.8
6H	24.5	25.3	24.8	25.5	25.7	24.5	25.3	24.8	25.5	25.7
8H	24.5	25.2	24.8	25.4	25.7	24.5	25.2	24.8	25.4	25.7
12H	24.4	25.1	24.7	25.4	25.7	24.4	25.1	24.7	25.4	25.7
4H 2H	24.5	25.3	24.8	25.5	25.8	24.5	25.3	24.8	25.5	25.7
3H	24.5	25.2	24.8	25.5	25.7	24.5	25.2	24.8	25.5	25.7
4H	24.5	25.1	24.8	25.4	25.7	24.5	25.1	24.8	25.4	25.7
6H	24.4	25.0	24.8	25.3	25.7	24.4	25.0	24.8	25.3	25.7
8H	24.4	24.9	24.8	25.3	25.6	24.4	24.9	24.8	25.3	25.6
12H	24.4	24.8	24.8	25.2	25.6	24.4	24.8	24.8	25.2	25.6
8H 4H	24.4	24.9	24.8	25.2	25.6	24.4	24.9	24.8	25.2	25.6
6H	24.3	24.8	24.8	25.2	25.6	24.3	24.8	24.8	25.2	25.6
8H	24.3	24.7	24.8	25.1	25.5	24.3	24.7	24.8	25.1	25.5
12H	24.3	24.6	24.7	25.0	25.5	24.3	24.6	24.7	25.0	25.5
12H 4H	24.3	24.8	24.7	25.2	25.6	24.3	24.8	24.7	25.2	25.6
6H	24.3	24.7	24.7	25.1	25.5	24.3	24.7	24.7	25.1	25.5
8H	24.3	24.6	24.7	25.0	25.5	24.3	24.6	24.7	25.0	25.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 2.3 / - 4.0					+ 2.3 / - 4.0				
1.5H	+ 3.7 / - 3.1					+ 3.6 / - 3.1				
2.0H	+ 3.5 / - 2.9					+ 3.6 / - 3.0				

CIE Pub.117, 750.0 lm Total Lamp Luminous Flux Corrected (8log(F/F0) = -1.0)
Area: 0.0005 m2

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421 Lamp Flux:749.963x1 lm		
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	Shielding Angle:

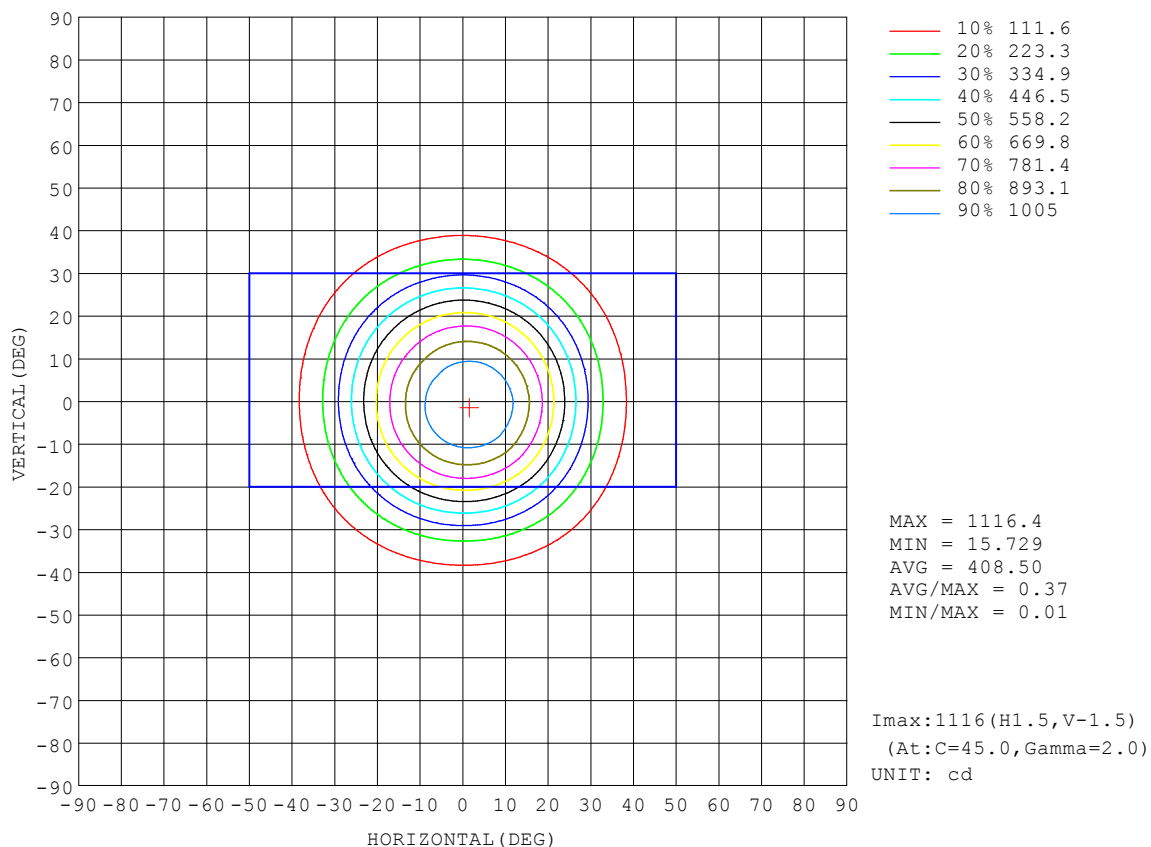
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	86	79	75	85	79	75	85	79	75	71
0.80	94	87	83	93	87	83	92	86	83	79
1.00	98	92	89	97	92	88	96	92	88	84
1.25	102	97	93	101	96	93	99	95	92	88
1.50	105	100	97	104	100	96	102	98	95	91
2.00	108	104	100	107	103	100	104	101	98	93
2.50	110	106	103	108	105	102	105	102	100	94
3.00	111	108	105	110	107	104	106	104	102	95
4.00	114	111	108	111	109	107	108	106	104	97
5.00	115	112	111	113	111	109	109	107	106	98
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: 2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421 Lamp Flux:749.963x1 lm		
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	Shielding Angle:

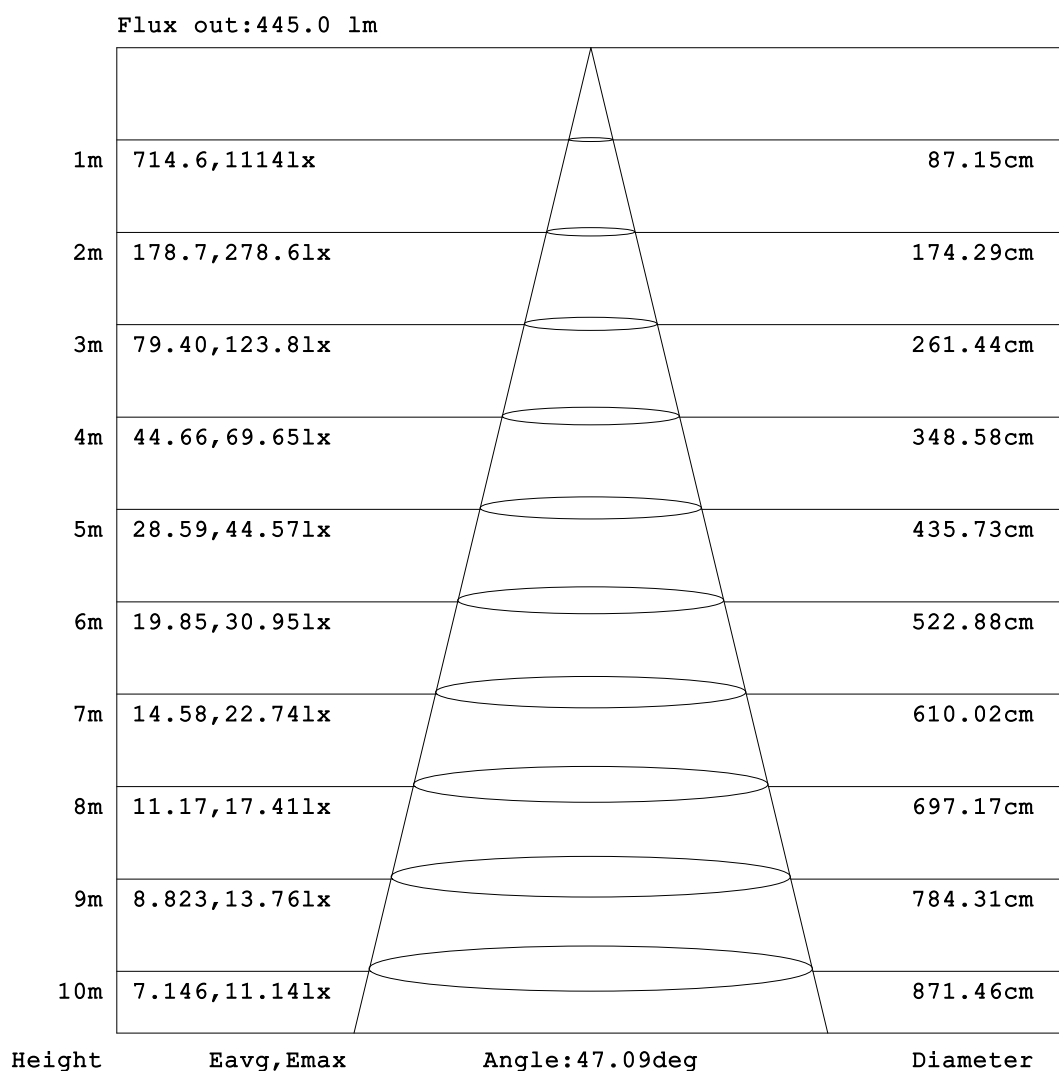


C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421		Lamp Flux:749.963x1 lm
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	Shielding Angle:



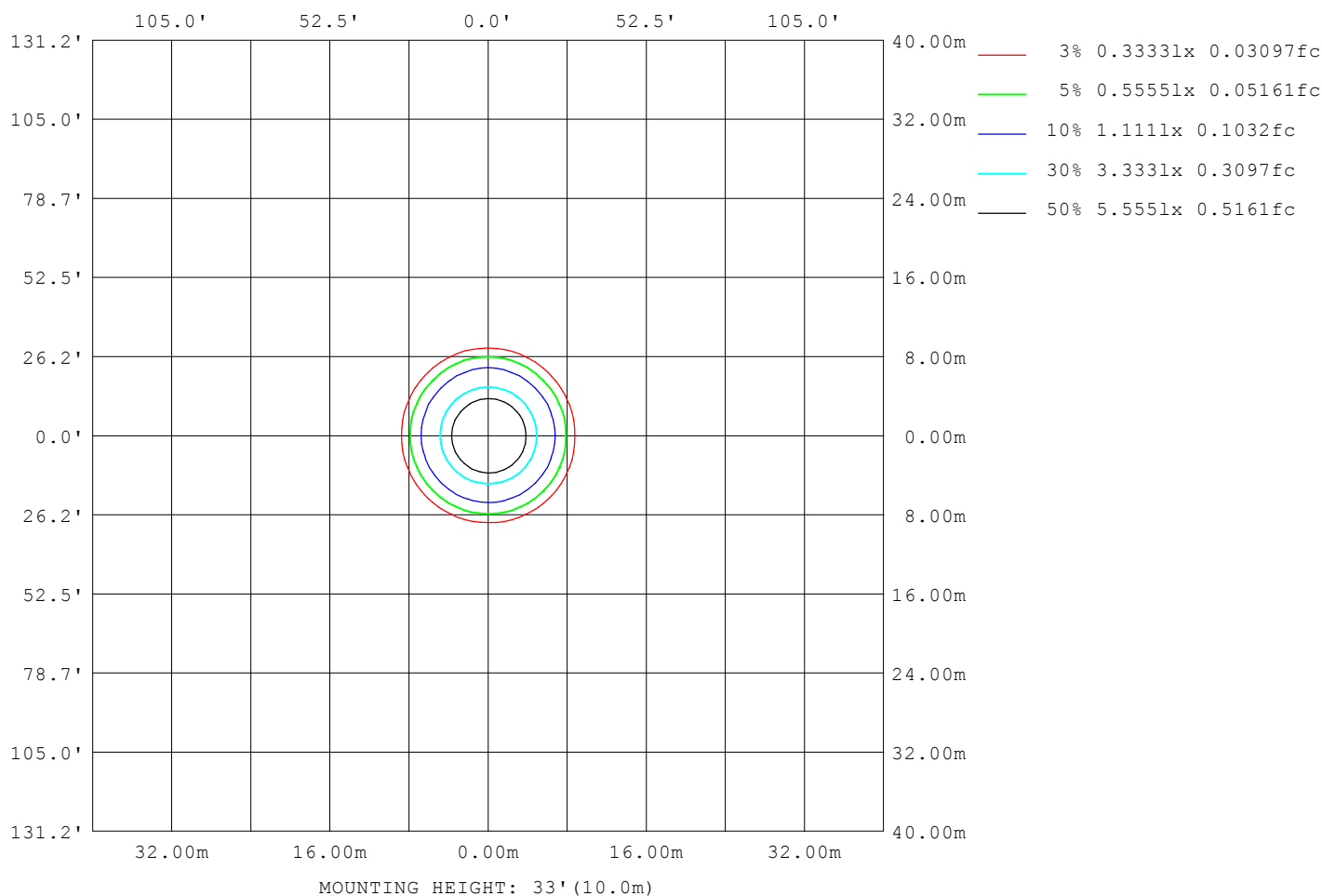
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421		Lamp Flux:749.963x1 lm
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 45.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:DAMIN
 Test Date:2024-03-16

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:0.0416A P:9.3W PF:0.9267 Freq:49.99Hz		
UTHDi:0.18% ITHDi:18.07% KDisp:0.9421 Lamp Flux:749.963x1 lm		
NAME: MD10-09-XX-16 2700K RA90 50D	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: Norming Lighting	SUR.: 26mm	Shielding Angle:

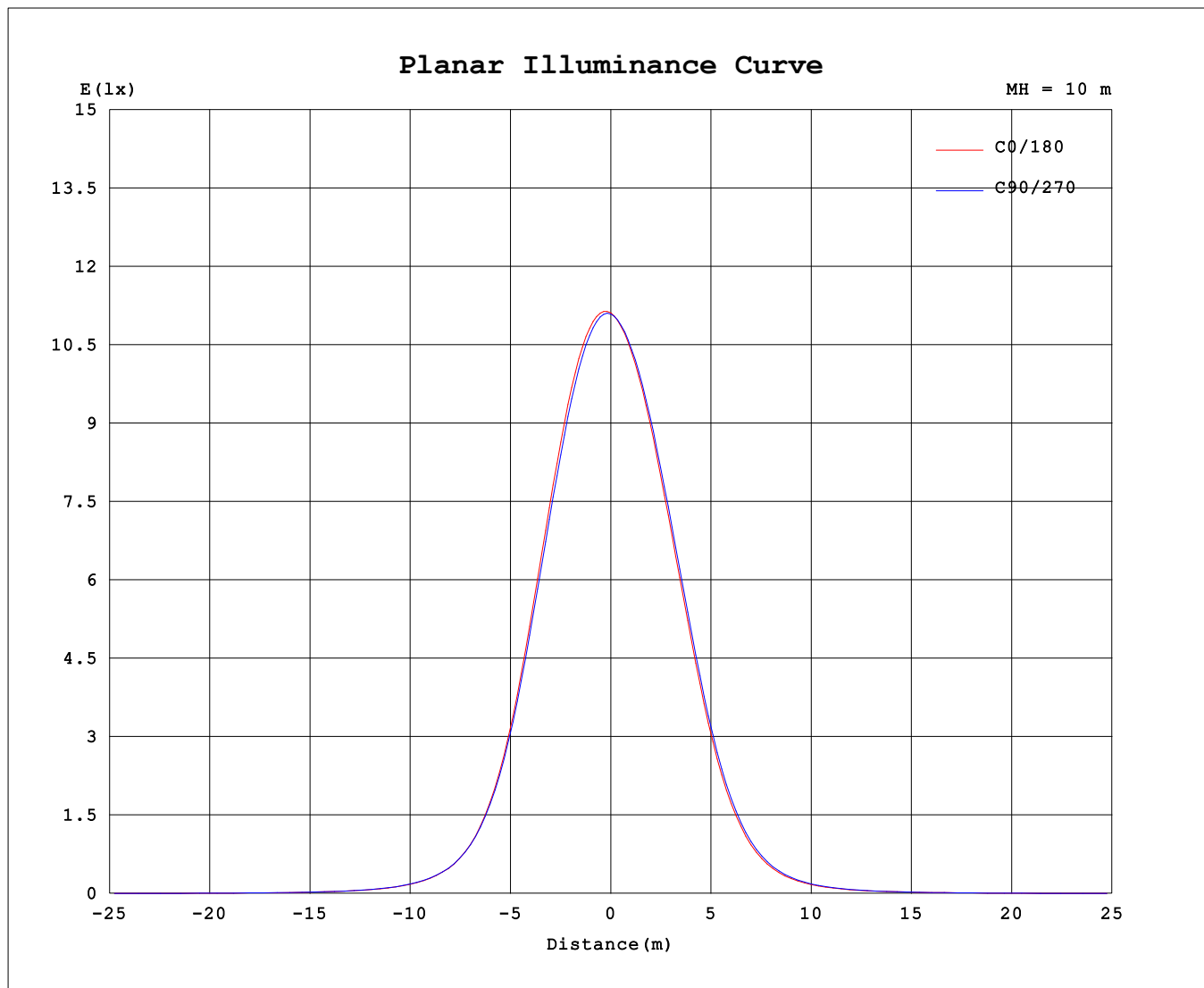
AvgL	cd/m2
L_0~180 (65) av	31781
L_0~180 (75) av	17700
L_0~180 (85) av	8928
L_90~270 (65) av	31991
L_90~270 (75) av	17887
L_90~270 (85) av	8502
L_45 (65) av	32219
L_45 (75) av	18137
L_45 (85) av	8590

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-03-16

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: 2024-03-16

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	1109	1109	1109	1109	1109	1109	1109	1109
3.0	1114	1115	1109	1098	1088	1085	1092	1104
6.0	1098	1100	1086	1069	1051	1046	1059	1080
9.0	1061	1062	1042	1021	998.2	992.3	1010	1037
12.0	998.9	999.4	976.4	953.2	929.0	924.3	945.0	973.0
15.0	912.4	913.7	888.2	867.2	844.9	842.6	864.2	889.7
18.0	806.2	808.0	782.7	765.0	748.9	749.2	769.6	789.2
21.0	683.7	685.6	662.9	649.7	640.9	645.3	662.5	674.6
24.0	553.0	554.5	536.0	528.8	525.7	532.7	546.9	551.0
27.0	425.4	427.2	413.4	410.5	410.5	418.8	429.7	428.2
30.0	311.4	314.1	304.4	303.8	304.8	313.2	321.8	316.9
33.0	219.3	223.8	215.8	217.3	217.9	224.0	230.7	224.5
36.0	150.0	154.2	149.9	149.7	149.2	155.0	160.2	154.0
39.0	102.2	106.1	103.4	102.5	101.6	105.5	109.6	104.6
42.0	70.94	73.67	72.45	70.74	69.58	72.56	75.13	72.09
45.0	50.01	51.97	51.18	49.85	48.77	50.49	52.28	50.23
48.0	35.95	37.22	36.77	35.78	35.00	36.05	37.10	35.84
51.0	26.30	27.13	26.86	26.26	25.78	26.37	26.88	26.09
54.0	19.47	20.15	19.80	19.66	19.41	19.72	19.96	19.37
57.0	14.54	14.91	14.72	14.69	14.64	14.90	14.82	14.48
60.0	10.88	11.12	10.95	11.03	11.07	11.28	11.11	10.90
63.0	8.110	8.268	8.176	8.247	8.304	8.515	8.312	8.184
66.0	5.981	6.135	6.062	6.120	6.146	6.296	6.177	6.074
69.0	4.394	4.559	4.493	4.540	4.521	4.628	4.569	4.481
72.0	3.196	3.313	3.255	3.319	3.317	3.392	3.339	3.270
75.0	2.228	2.354	2.265	2.338	2.354	2.406	2.364	2.290
78.0	1.521	1.643	1.533	1.607	1.634	1.660	1.633	1.557
81.0	1.004	1.099	0.9921	1.049	1.095	1.091	1.075	1.018
84.0	0.5049	0.5557	0.4979	0.5234	0.5853	0.5787	0.5693	0.5159
87.0	0.0510	0.0234	0.0446	0.0741	0.1268	0.1384	0.1348	0.0707
90.0	0.0186	0.0177	0.0251	0.0132	0.0183	0.0144	0.0177	0.0132

C Range: 0 - 360DEG
C Interval: 45.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:DAMIN
Test Date:2024-03-16

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: