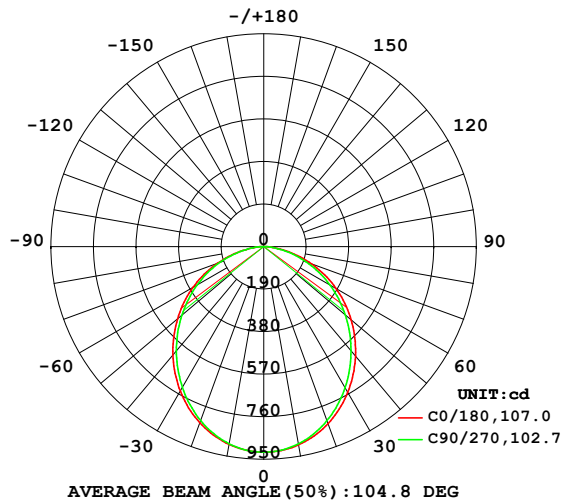


**LUMINAIRE PHOTOMETRIC TEST REPORT**

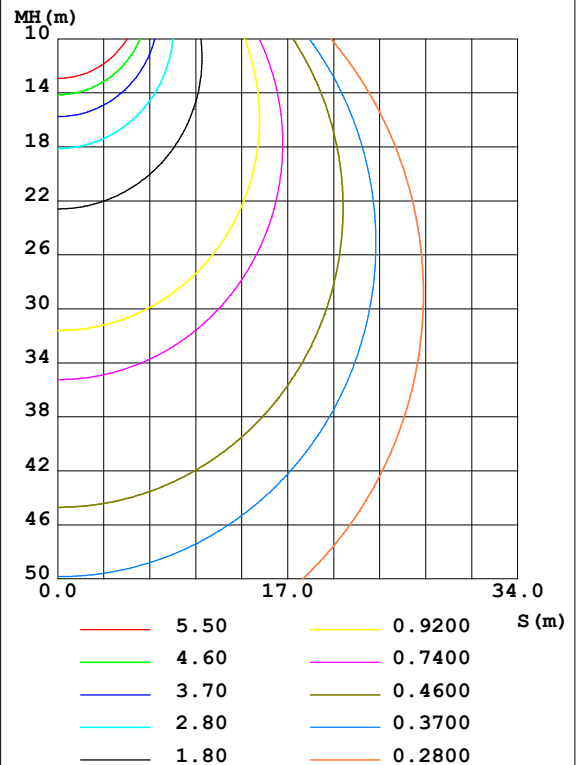
Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERFUS0	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 93.45 lm/W			
MODEL: 2000A	1300lm 940 HV ADV6	Imax(cd)	918.3	S/MH(C0/180)	1.21
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.19
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	2402.1	$\eta$ UP,DN(C0-180)	0.0,49.9
NOMINAL FLUX(lm)	2402.08	CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.1
LAMPS INSIDE	1	$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	$\eta$ down(%)	100.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

### ZONAL FLUX DIAGRAM

#### ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	898.9	895.7	894.5	896.7	896.7	896.4	894.0	895.7	0- 10	86.60	86.60	3.61,3.61
20	841.1	831.8	827.0	833.5	836.9	833.6	826.4	831.9	10- 20	244.9	331.5	13.8,13.8
30	751.1	736.1	727.0	738.2	745.7	738.6	726.8	736.3	20- 30	363.1	694.6	28.9,28.9
40	638.2	618.8	606.9	621.2	631.8	622.2	607.4	619.9	30- 40	426.0	1121	46.7,46.7
50	510.0	488.8	475.8	491.5	503.4	493.6	477.9	491.0	40- 50	429.8	1550	64.5,64.5
60	372.1	351.5	340.0	354.3	365.1	357.8	344.0	355.0	50- 60	378.8	1929	80.3,80.3
70	228.0	210.5	203.0	213.5	221.2	218.4	208.8	215.6	60- 70	281.9	2211	92.1,92.1
80	87.92	77.92	75.89	80.62	82.28	85.84	82.29	83.25	70- 80	154.8	2366	98.5,98.5
90	1.161	0.6705	0.6120	0.6635	0.6410	1.066	0.8209	0.6268	80- 90	36.16	2402	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): 1338.6 lm

%lum = 55.7%

%lamp = 55.7%

Conical surface Flux(120deg): 1929.2 lm

%lum = 80.3%

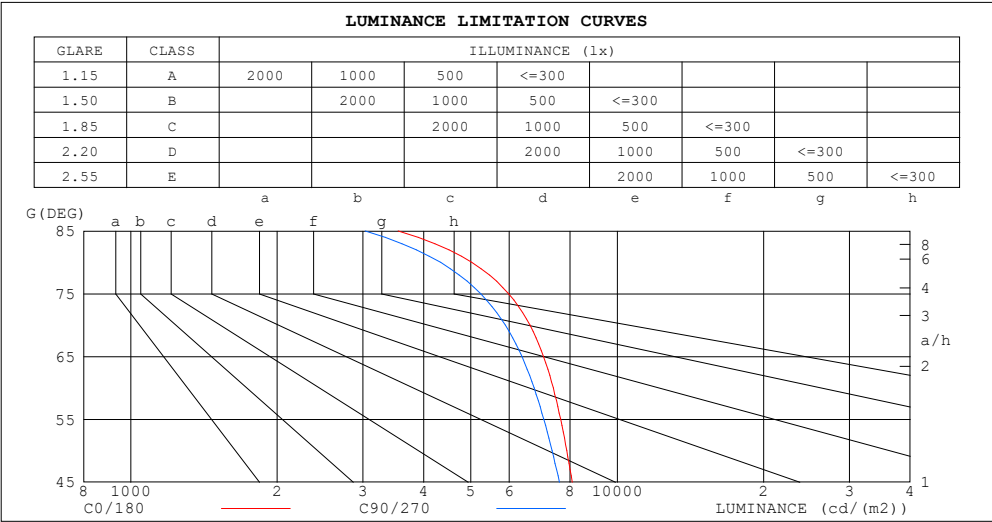
%lamp = 80.3%

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERIOD		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	3547	3032
80	5025	4336
75	5980	5242
70	6618	5888
65	7055	6369
60	7387	6747
55	7649	7064
50	7875	7345
45	8080	7608

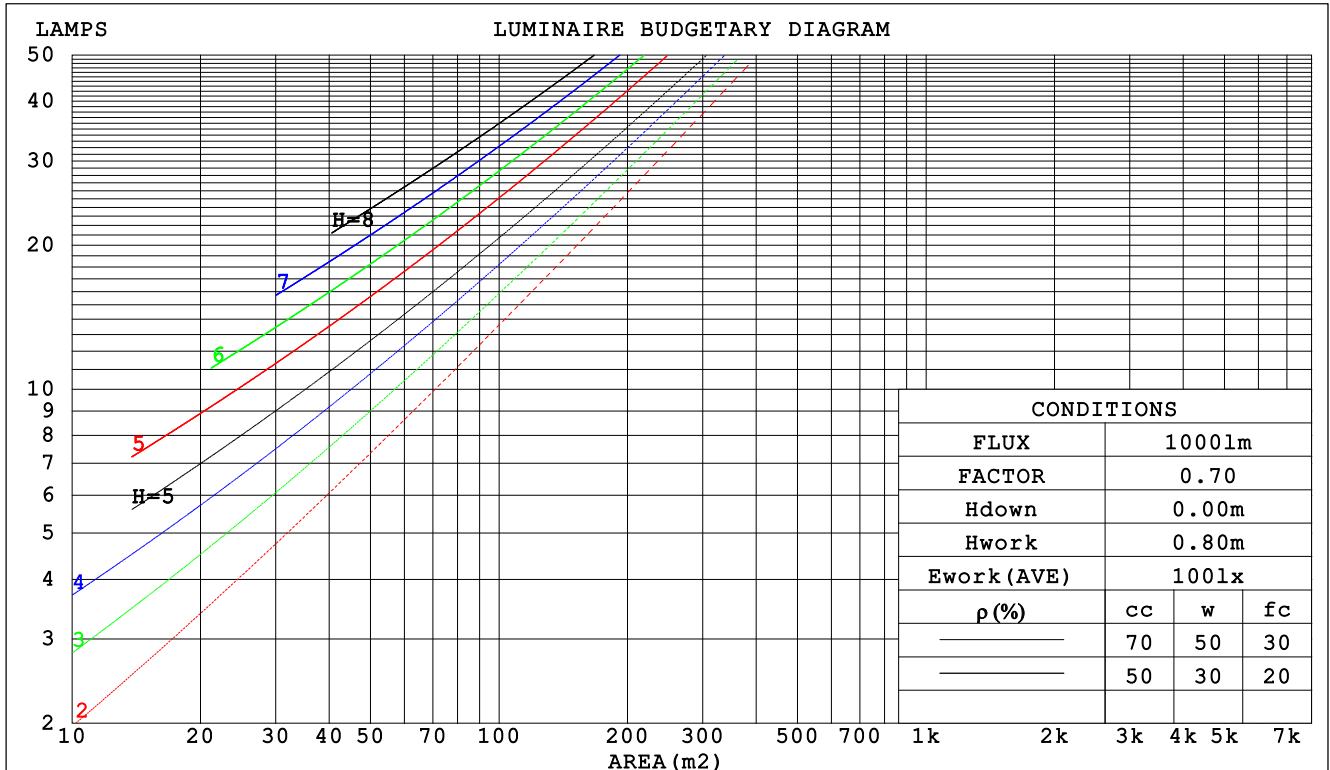
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERIOD		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

$\rho_{cc}$	80%			70%			50%			30%			10%			0
$\rho_w$	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
$\rho_{fc}$	20%			20%			20%			20%			20%			0
RCR	Coefficients of Utilization(CU)															
RCR:Room Cavity Ratio																
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	1.04	1.00	.96	1.02	.98	.95	.98	.95	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.85	.79	.89	.83	.78	.86	.81	.76	.83	.78	.74	.80	.76	.73	.71
3.0	.80	.72	.66	.79	.71	.65	.76	.69	.64	.73	.68	.63	.70	.66	.62	.60
4.0	.71	.63	.56	.70	.62	.56	.67	.60	.55	.65	.59	.54	.63	.58	.53	.51
5.0	.64	.55	.48	.63	.54	.48	.61	.53	.48	.59	.52	.47	.57	.51	.46	.44
6.0	.58	.49	.42	.57	.48	.42	.55	.47	.42	.53	.46	.41	.51	.46	.41	.39
7.0	.52	.44	.37	.51	.43	.37	.50	.42	.37	.48	.42	.37	.47	.41	.36	.34
8.0	.48	.39	.33	.47	.39	.33	.46	.38	.33	.44	.38	.33	.43	.37	.33	.31
9.0	.44	.36	.30	.43	.35	.30	.42	.35	.30	.41	.34	.30	.40	.34	.30	.28
10.0	.40	.33	.27	.40	.32	.27	.39	.32	.27	.38	.32	.27	.37	.31	.27	.25



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

**WEC AND CCEC**

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERIOD	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	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	.300	.171	.054	.293	.167	.053	.280	.161	.051	.268	.154	.050	.256	.149	.048		
2.0	.284	.156	.048	.278	.153	.047	.266	.148	.046	.256	.143	.045	.246	.139	.044		
3.0	.264	.141	.042	.259	.138	.042	.248	.135	.041	.239	.131	.040	.230	.127	.039		
4.0	.244	.127	.037	.240	.125	.037	.230	.122	.036	.222	.119	.036	.214	.116	.035		
5.0	.226	.115	.033	.222	.114	.033	.214	.111	.033	.206	.109	.032	.199	.107	.032		
6.0	.210	.105	.030	.207	.104	.030	.199	.102	.030	.193	.100	.029	.186	.098	.029		
7.0	.196	.097	.027	.193	.096	.027	.186	.094	.027	.180	.092	.027	.175	.091	.027		
8.0	.183	.090	.025	.180	.089	.025	.174	.087	.025	.169	.086	.025	.164	.084	.025		
9.0	.172	.083	.023	.169	.082	.023	.164	.081	.023	.159	.080	.023	.155	.079	.023		
10.0	.162	.078	.022	.159	.077	.021	.155	.076	.021	.150	.075	.021	.146	.074	.021		

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	.180	.156	.135	.154	.134	.116	.105	.092	.080	.061	.053	.047	.019	.017	.015	
2.0	.171	.132	.099	.147	.114	.086	.101	.079	.060	.058	.046	.035	.019	.015	.011	
3.0	.163	.114	.075	.140	.099	.065	.096	.068	.046	.056	.040	.027	.018	.013	.009	
4.0	.156	.101	.059	.134	.087	.051	.092	.061	.036	.053	.036	.021	.017	.012	.007	
5.0	.148	.090	.048	.127	.078	.042	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.141	.082	.040	.121	.071	.035	.084	.050	.024	.049	.029	.015	.016	.010	.005	
7.0	.134	.075	.034	.116	.065	.029	.080	.046	.021	.046	.027	.012	.015	.009	.004	
8.0	.128	.069	.029	.110	.060	.025	.076	.042	.018	.044	.025	.011	.014	.008	.004	
9.0	.122	.064	.025	.105	.056	.022	.073	.039	.016	.042	.023	.009	.014	.008	.003	
10.0	.116	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm										
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERFUS0								WEIGHT:		
SPEC.:				DIM.:				SERIAL No.:1		
MFR.: DARKON				SUR.:				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	19.9	21.4	20.2	21.6	21.8	19.5	21.0	19.8	21.2	21.4
3H	21.4	22.7	21.7	23.0	23.2	20.9	22.3	21.2	22.5	22.7
4H	21.9	23.2	22.2	23.5	23.7	21.4	22.7	21.7	23.0	23.2
6H	22.3	23.5	22.6	23.8	24.1	21.7	23.0	22.1	23.2	23.5
8H	22.4	23.6	22.7	23.9	24.2	21.8	23.0	22.1	23.3	23.6
12H	22.4	23.6	22.8	23.9	24.2	21.8	23.0	22.2	23.3	23.6
4H 2H	20.4	21.7	20.7	22.0	22.2	20.1	21.4	20.4	21.7	21.9
3H	22.1	23.2	22.4	23.5	23.8	21.7	22.8	22.0	23.1	23.4
4H	22.8	23.8	23.1	24.1	24.5	22.3	23.3	22.7	23.7	24.0
6H	23.2	24.2	23.6	24.5	24.9	22.7	23.7	23.1	24.0	24.4
8H	23.4	24.2	23.8	24.6	25.0	22.8	23.7	23.3	24.1	24.5
12H	23.4	24.2	23.9	24.6	25.0	22.9	23.7	23.3	24.1	24.5
8H 4H	22.9	23.8	23.4	24.2	24.6	22.5	23.4	23.0	23.8	24.2
6H	23.5	24.3	24.0	24.7	25.1	23.1	23.8	23.5	24.2	24.6
8H	23.7	24.4	24.2	24.8	25.3	23.3	23.9	23.7	24.3	24.8
12H	23.9	24.4	24.3	24.9	25.3	23.4	23.9	23.8	24.4	24.8
12H 4H	22.9	23.7	23.4	24.1	24.5	22.5	23.3	23.0	23.7	24.1
6H	23.6	24.2	24.0	24.6	25.1	23.1	23.8	23.6	24.2	24.6
8H	23.8	24.3	24.3	24.8	25.3	23.3	23.9	23.8	24.3	24.8
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				

CIE Pub.117 Corrected 2402 lm Total Lamp Luminous Flux. (8log(F/F0) = 3.0)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERC100	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

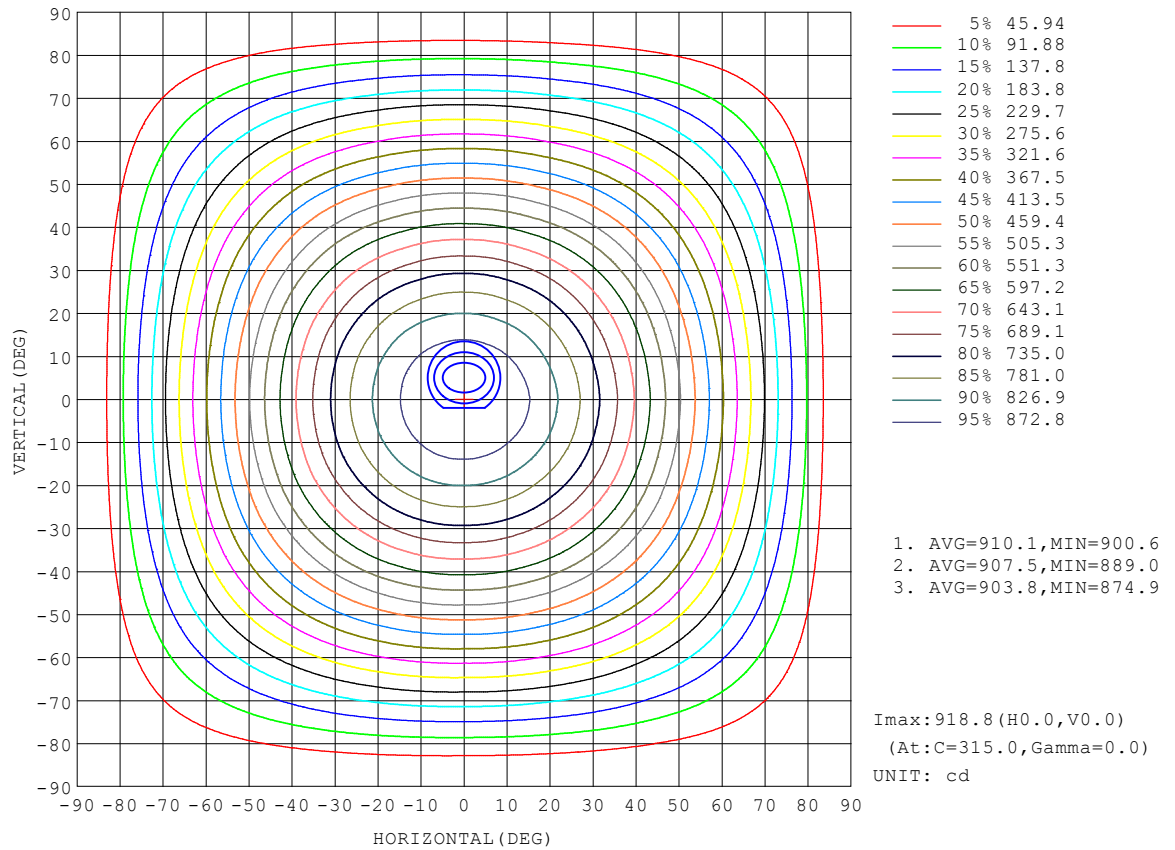
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	59	47	40	58	47	40	57	47	40	34
0.80	69	57	50	68	57	50	66	56	50	43
1.00	77	66	59	76	66	59	74	67	58	51
1.25	84	74	67	83	73	66	80	72	66	59
1.50	89	79	73	87	78	72	84	77	71	64
2.00	96	87	81	94	86	80	90	84	79	71
2.50	100	92	86	98	91	85	94	88	83	75
3.00	103	96	91	101	95	90	97	92	88	79
4.00	107	101	97	104	99	95	100	96	93	84
5.00	109	104	100	107	102	99	102	99	96	87
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:JEFF  
Test Date:23 January 2025

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

**ISOCANDELA DIAGRAM**

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERFUS0	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

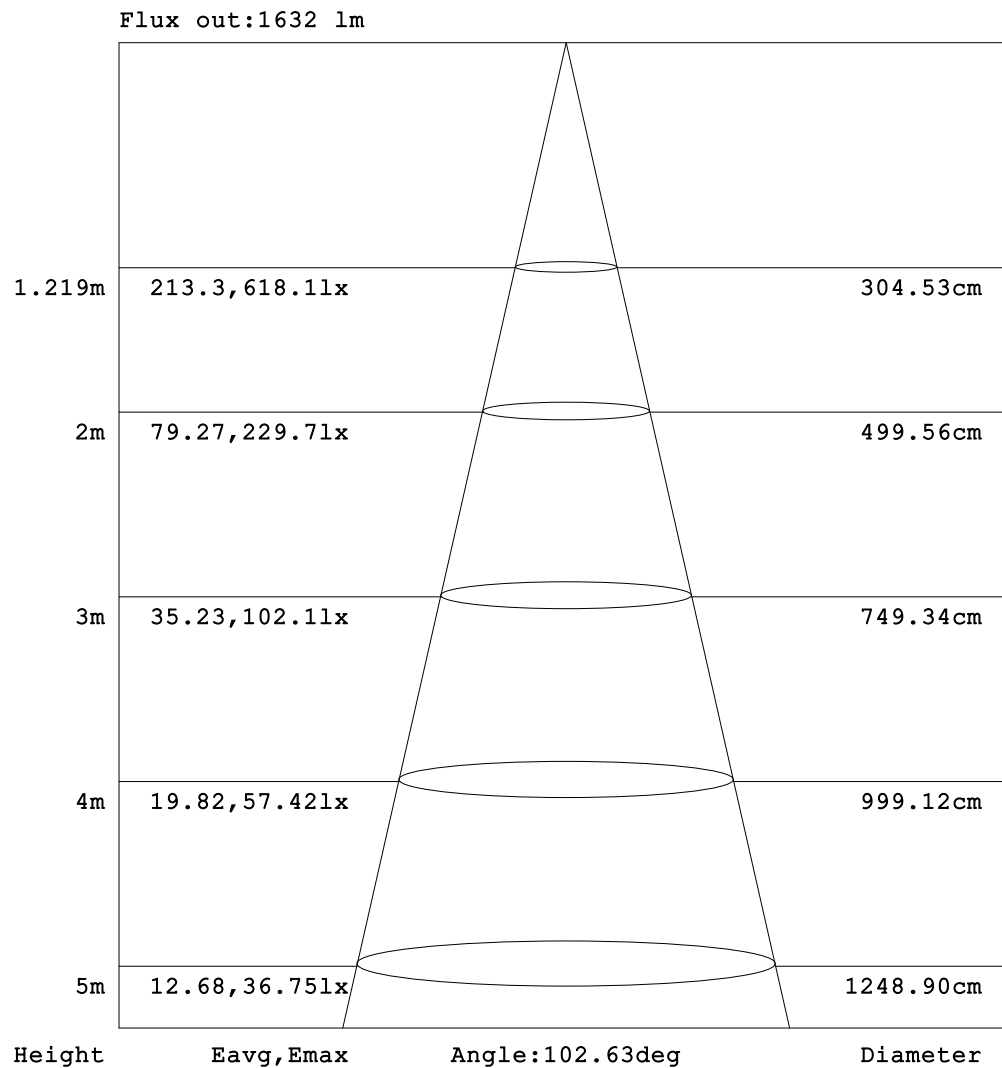


C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

**AAI Figure**

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERIOD	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



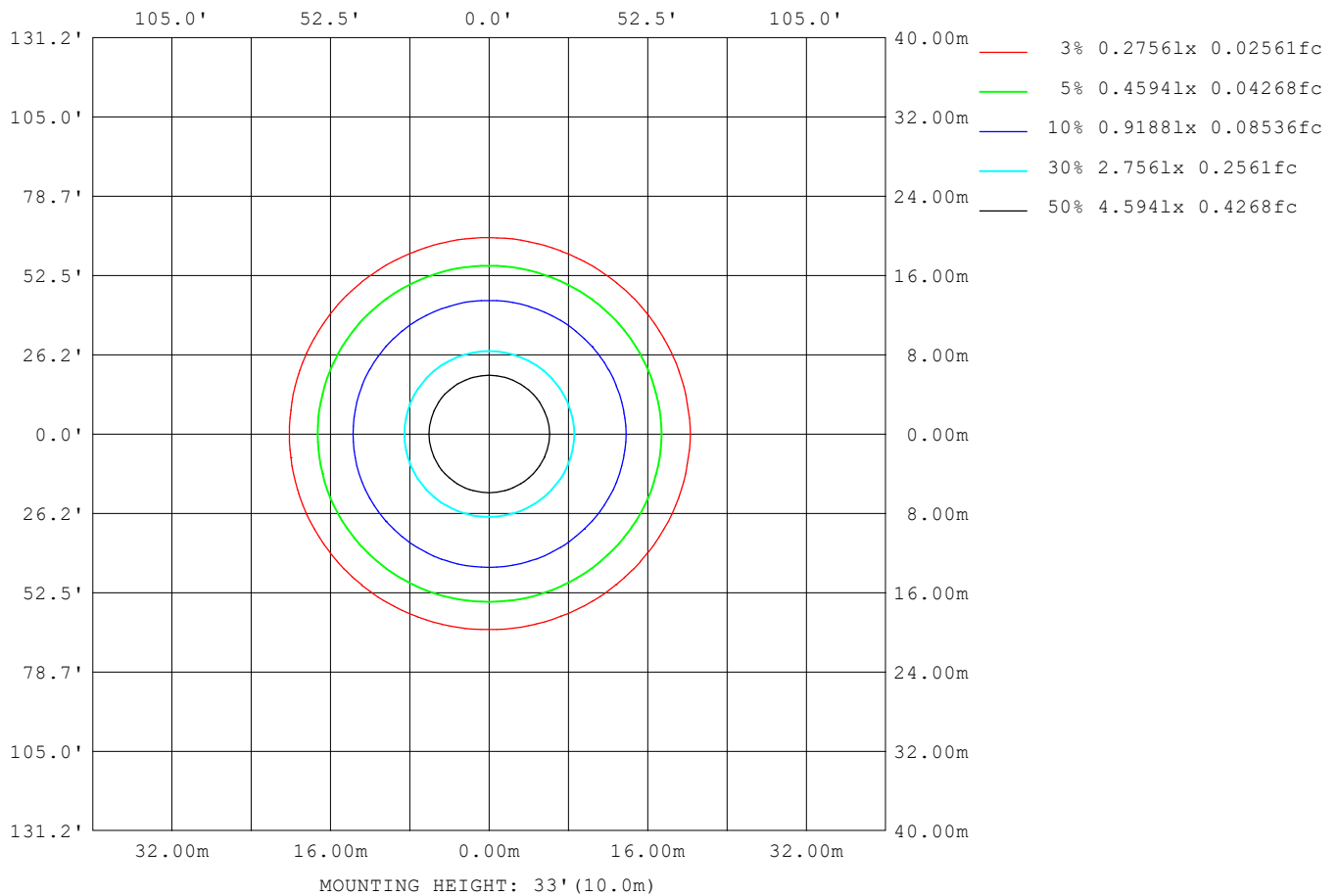
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERIOD	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:25.3DEG  
 Operators:JEFF  
 Test Date:23 January 2025

γ Range: 0 - 90DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
 Humidity:65.0%  
 Test Distance:7.889m [K=1.0000]  
 Remarks:

### LED Avg.L Report

Test:U:240.0V I:0.1152A P:25.70W PF:0.9295 Lamp Flux:2402.08x1 lm		
NAME: MRS T-G_DIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000KPERFUS0		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

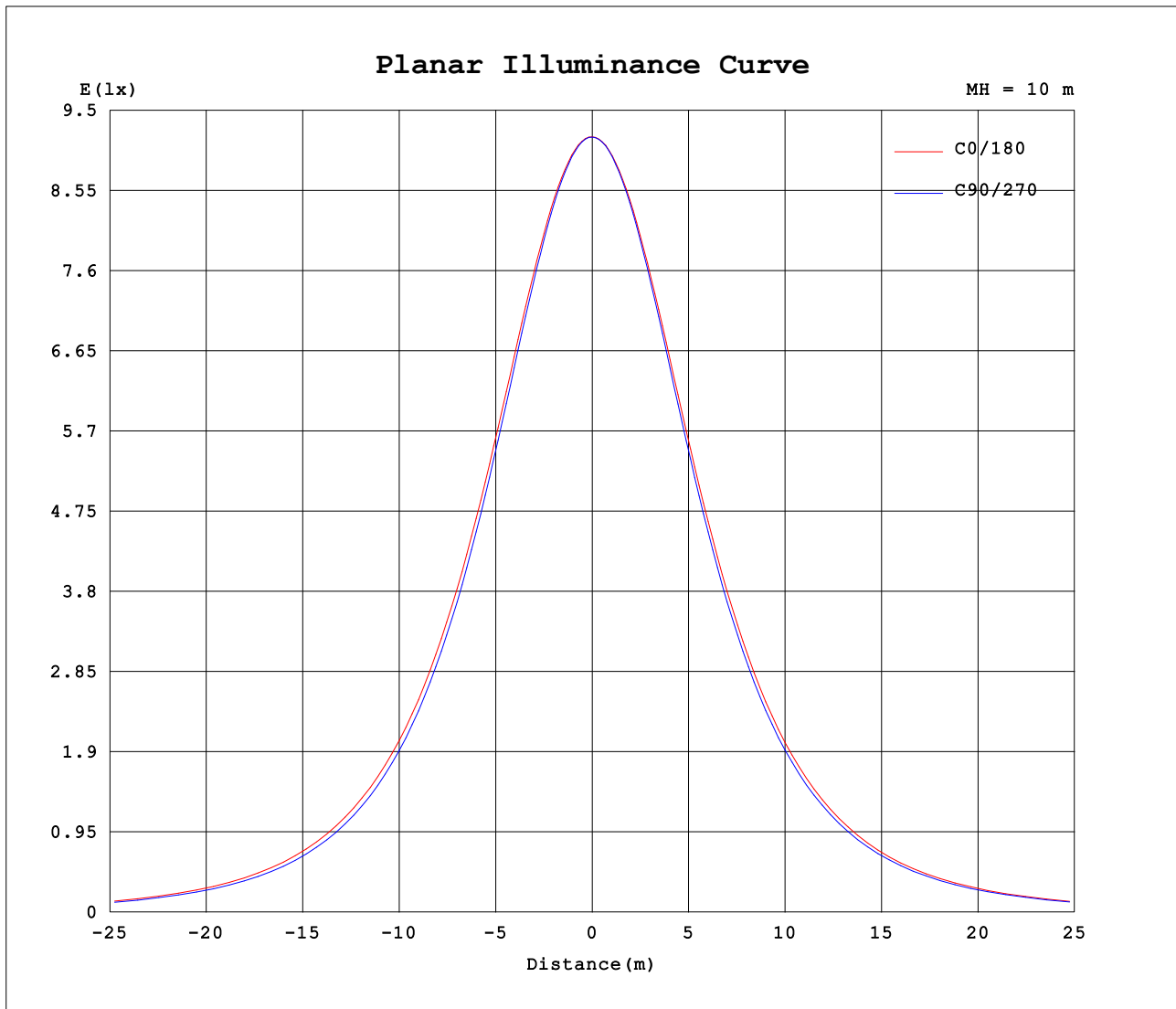
AvgL	cd/m2
L_0~180 (65) av	6972
L_0~180 (75) av	5853
L_0~180 (85) av	3317
L_90~270 (65) av	6426
L_90~270 (75) av	5365
L_90~270 (85) av	3290
L_45 (65) av	6682
L_45 (75) av	5586
L_45 (85) av	3339

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:23 January 2025

γ Range: 0 - 90DEG  
γ Interval: 1.0DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.889m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 23 January 2025

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.889m [K=1.0000]  
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.889m [K=1.0000]
Remarks:

```