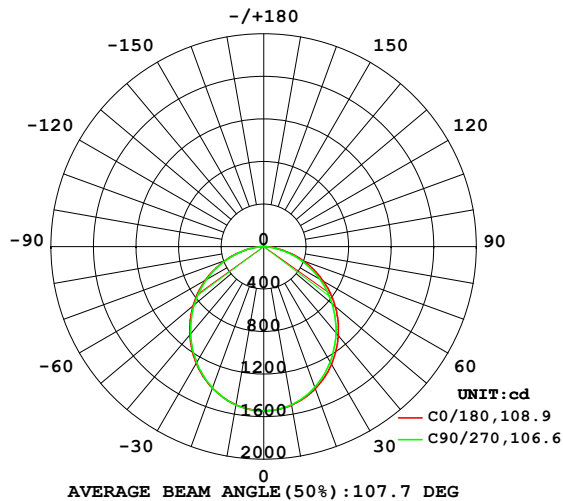


LUMINAIRE PHOTOMETRIC TEST REPORT

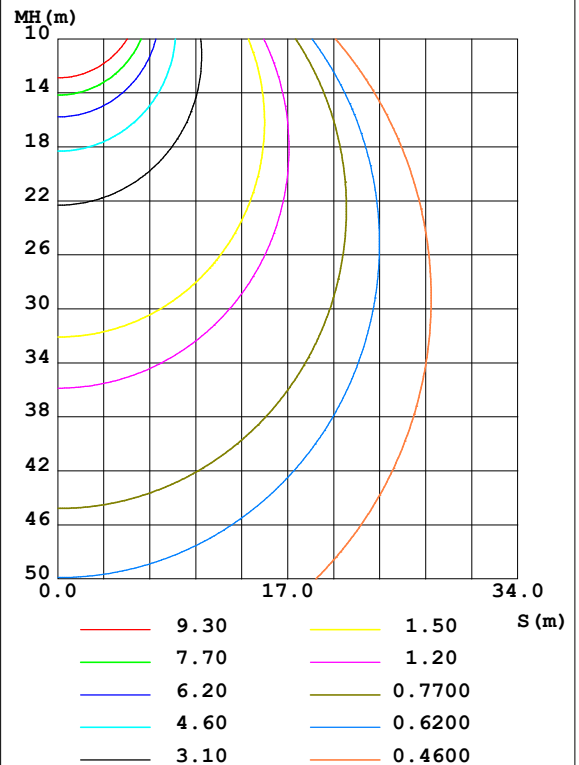
Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K:LM190	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 110.72 lm/W			
LLE MCE60mm	1300lm 940 HV ADV6	Imax(cd)	1545	S/MH(C0/180)	1.23
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)	230.0	TOTAL FLUX(lm)	4174.1	η UP,DN(C0-180)	0.0,49.8
NOMINAL FLUX(lm)	4174.13	CIE CLASS	DIRECT	η UP,DN(C180-360)	0.0,50.2
LAMPS INSIDE	1	η up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η 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:19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [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	1514	1508	1509	1513	1510	1515	1513	1511	0- 10	145.9	145.9	3.49,3.49
20	1421	1409	1407	1418	1415	1422	1414	1413	10- 20	414.7	560.6	13.4,13.4
30	1277	1255	1251	1267	1268	1273	1261	1262	20- 30	619.7	1180	28.3,28.3
40	1092	1064	1058	1078	1083	1086	1071	1073	30- 40	734.3	1915	45.9,45.9
50	878.8	846.0	840.2	862.0	868.9	871.5	854.6	856.6	40- 50	748.4	2663	63.8,63.8
60	645.8	612.0	606.7	629.0	635.5	639.4	622.2	623.6	50- 60	665.7	3329	79.7,79.7
70	399.5	369.1	366.9	386.5	389.2	396.9	382.2	380.6	60- 70	500.0	3829	91.7,91.7
80	159.1	140.4	139.4	155.7	150.3	164.0	150.9	149.2	70- 80	279.4	4108	98.4,98.4
90	4.497	3.037	1.115	3.633	3.899	3.814	1.100	2.988	80- 90	66.07	4174	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): 2293.3 lm

%lum = 54.9%

%lamp = 54.9%

Conical surface Flux(120deg): 3328.7 lm

%lum = 79.7%

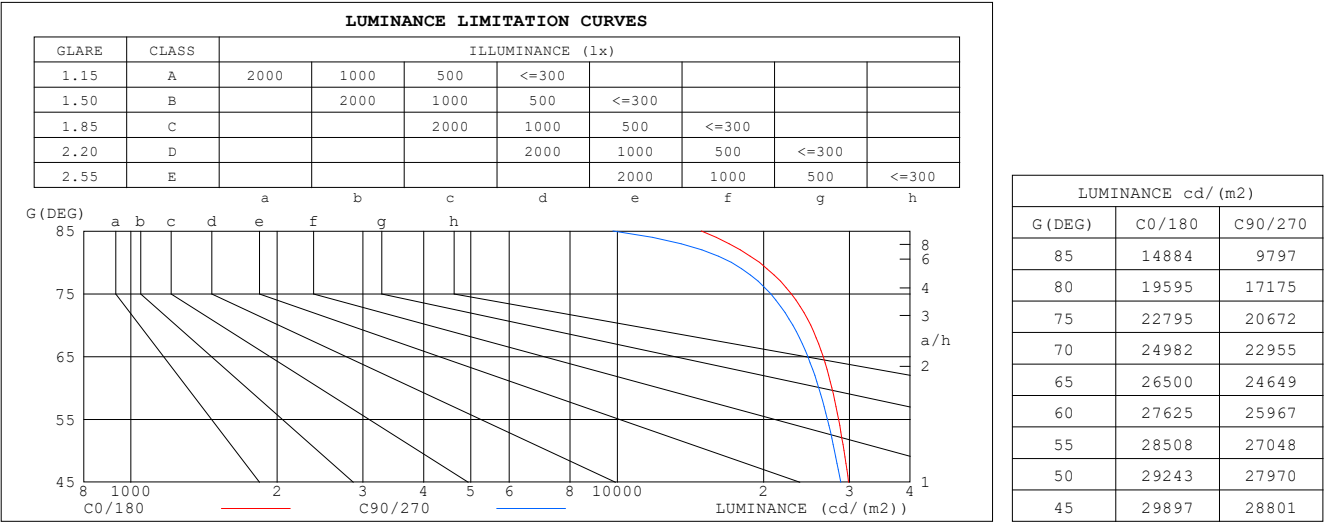
%lamp = 79.7%

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:19 March 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K:LM190	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



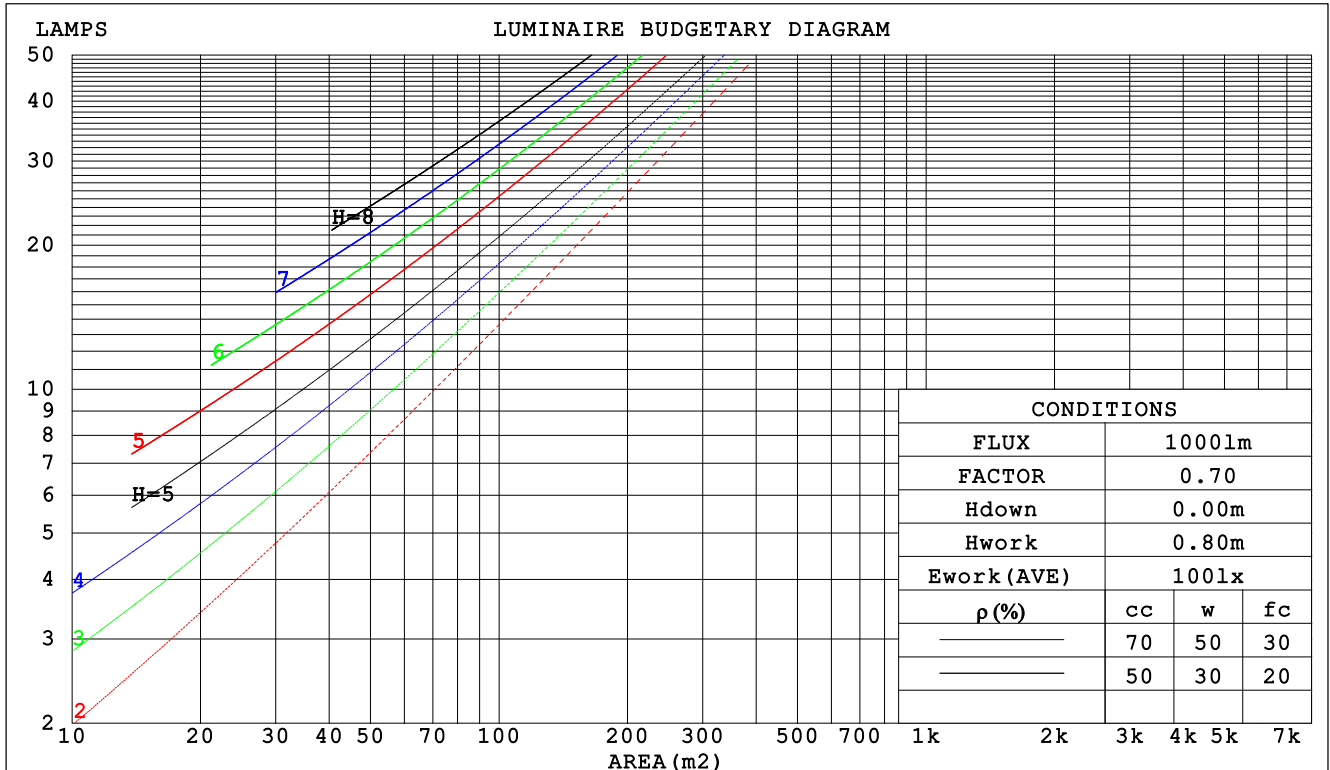
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K_LDI90		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

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	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	.00	.96	1.02	.98	.95	.98	.95	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.78	.86	.80	.76	.82	.78	.74	.79	.76	.72	.70
3.0	.80	.72	.65	.78	.71	.65	.75	.69	.64	.73	.67	.63	.70	.65	.61	.59
4.0	.71	.62	.55	.70	.61	.55	.67	.60	.54	.65	.59	.54	.63	.57	.53	.51
5.0	.63	.54	.48	.62	.54	.48	.60	.53	.47	.58	.52	.47	.56	.51	.46	.44
6.0	.57	.48	.42	.56	.48	.42	.54	.47	.41	.53	.46	.41	.51	.45	.40	.38
7.0	.52	.43	.37	.51	.43	.37	.49	.42	.37	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.39	.33	.45	.38	.33	.44	.37	.32	.43	.37	.32	.30
9.0	.43	.35	.30	.43	.35	.30	.42	.35	.29	.41	.34	.29	.40	.34	.29	.27
10.0	.40	.32	.27	.40	.32	.27	.39	.32	.27	.38	.31	.27	.37	.31	.27	.25



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:19 March 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

WEC AND CCEC

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K_DMI90	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	.303	.172	.055	.296	.169	.054	.283	.162	.052	.271	.156	.050	.260	.151	.049		
2.0	.287	.157	.048	.281	.155	.048	.269	.150	.046	.258	.145	.045	.248	.141	.044		
3.0	.266	.142	.042	.261	.140	.042	.251	.136	.041	.241	.132	.041	.232	.129	.040		
4.0	.246	.128	.038	.241	.126	.037	.232	.123	.037	.224	.120	.036	.216	.117	.036		
5.0	.228	.116	.034	.224	.115	.033	.216	.112	.033	.208	.110	.033	.201	.107	.032		
6.0	.212	.106	.030	.208	.105	.030	.201	.103	.030	.194	.101	.030	.187	.099	.029		
7.0	.197	.097	.028	.194	.097	.028	.187	.095	.027	.181	.093	.027	.176	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.088	.025	.170	.086	.025	.165	.085	.025		
9.0	.173	.084	.023	.170	.083	.023	.165	.082	.023	.160	.080	.023	.155	.079	.023		
10.0	.162	.078	.022	.160	.077	.022	.155	.076	.021	.151	.075	.021	.147	.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	.172	.132	.099	.147	.114	.085	.101	.079	.059	.058	.046	.035	.019	.015	.011	
3.0	.164	.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	.149	.090	.048	.128	.078	.041	.088	.055	.029	.051	.032	.017	.016	.010	.006	
6.0	.142	.082	.039	.122	.071	.034	.084	.050	.024	.049	.029	.014	.016	.010	.005	
7.0	.135	.075	.033	.116	.065	.029	.080	.046	.021	.047	.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	.043	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.101	.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:19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm											
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K_CRI90								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	2H	24.4	25.9	24.7	26.1	26.3	24.2	25.7	24.5	25.9	26.1
	3H	25.9	27.3	26.2	27.6	27.8	25.6	27.0	25.9	27.2	27.5
	4H	26.5	27.8	26.8	28.1	28.3	26.1	27.5	26.5	27.7	28.0
	6H	26.9	28.1	27.2	28.4	28.7	26.5	27.7	26.8	28.0	28.3
	8H	27.0	28.2	27.4	28.5	28.8	26.6	27.8	26.9	28.1	28.3
	12H	27.1	28.2	27.4	28.5	28.8	26.6	27.7	26.9	28.0	28.3
4H	2H	25.0	26.3	25.3	26.6	26.8	24.8	26.1	25.1	26.4	26.6
	3H	26.6	27.8	27.0	28.1	28.4	26.4	27.5	26.7	27.8	28.1
	4H	27.3	28.4	27.7	28.7	29.1	27.0	28.1	27.4	28.4	28.7
	6H	27.9	28.8	28.2	29.1	29.5	27.5	28.4	27.9	28.8	29.1
	8H	28.0	28.9	28.4	29.2	29.6	27.6	28.5	28.0	28.8	29.2
	12H	28.1	28.9	28.5	29.3	29.7	27.6	28.4	28.1	28.8	29.2
8H	4H	27.6	28.4	28.0	28.8	29.2	27.3	28.1	27.7	28.5	28.9
	6H	28.2	28.9	28.6	29.3	29.7	27.8	28.6	28.3	29.0	29.4
	8H	28.4	29.0	28.9	29.5	29.9	28.0	28.7	28.5	29.1	29.5
	12H	28.5	29.1	29.0	29.5	30.0	28.1	28.7	28.6	29.1	29.6
12H	4H	27.6	28.4	28.0	28.7	29.1	27.3	28.1	27.7	28.5	28.9
	6H	28.2	28.9	28.7	29.3	29.7	27.9	28.5	28.3	29.0	29.4
	8H	28.5	29.0	28.9	29.5	29.9	28.1	28.6	28.6	29.1	29.6
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 4174 lm Total Lamp Luminous Flux. (8log(F/F0) = 5.0)

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K_LDI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

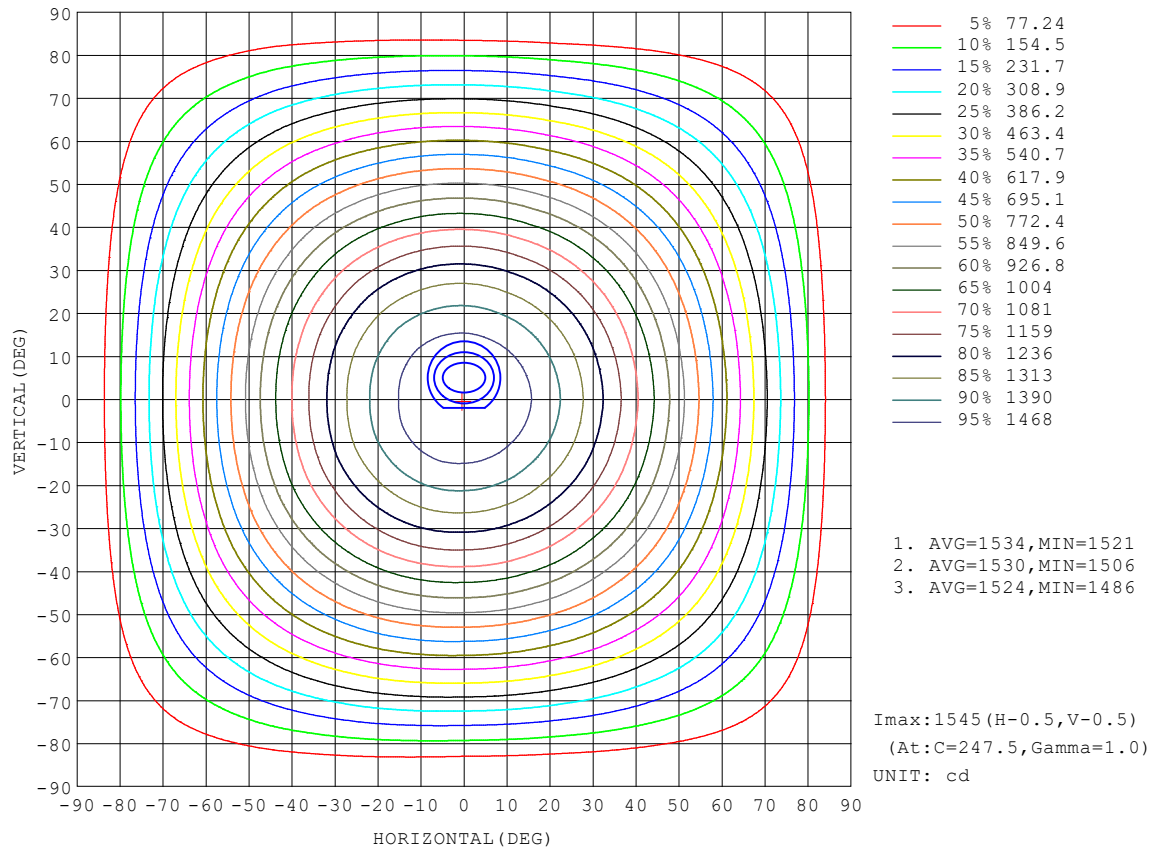
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	57	47	40	56	46	40	33
0.80	68	57	50	67	56	49	65	56	49	42
1.00	77	66	58	75	65	58	73	66	58	51
1.25	84	73	66	82	73	66	80	71	65	58
1.50	89	79	72	87	78	72	84	76	70	63
2.00	95	87	81	94	86	80	90	84	78	71
2.50	99	92	86	97	90	85	93	88	83	75
3.00	103	96	90	100	94	89	96	91	87	79
4.00	107	101	96	104	99	95	100	96	92	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: 19 March 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.891m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K:LM190	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

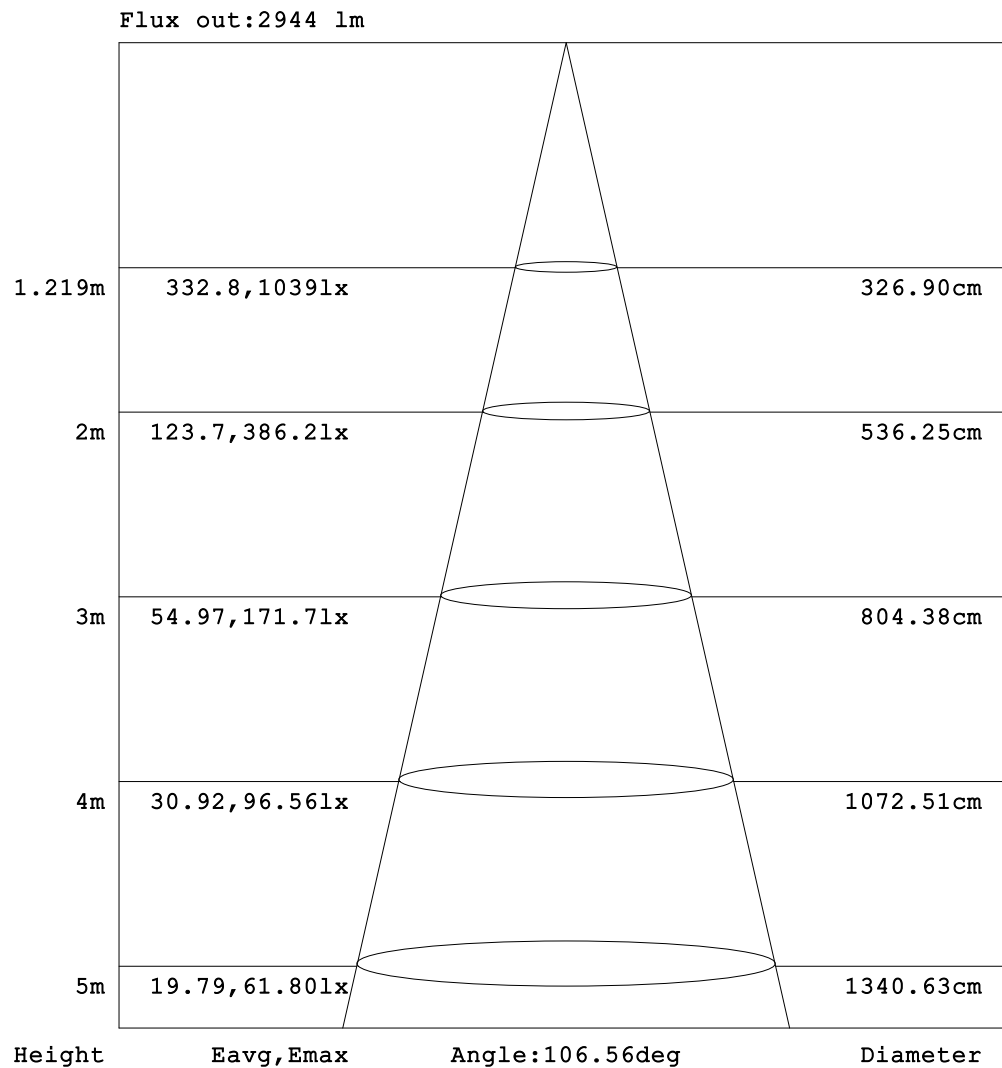


C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: JEFF
Test Date: 19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.891m [K=1.0000]
Remarks:

AAI Figure

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K_LBI90	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



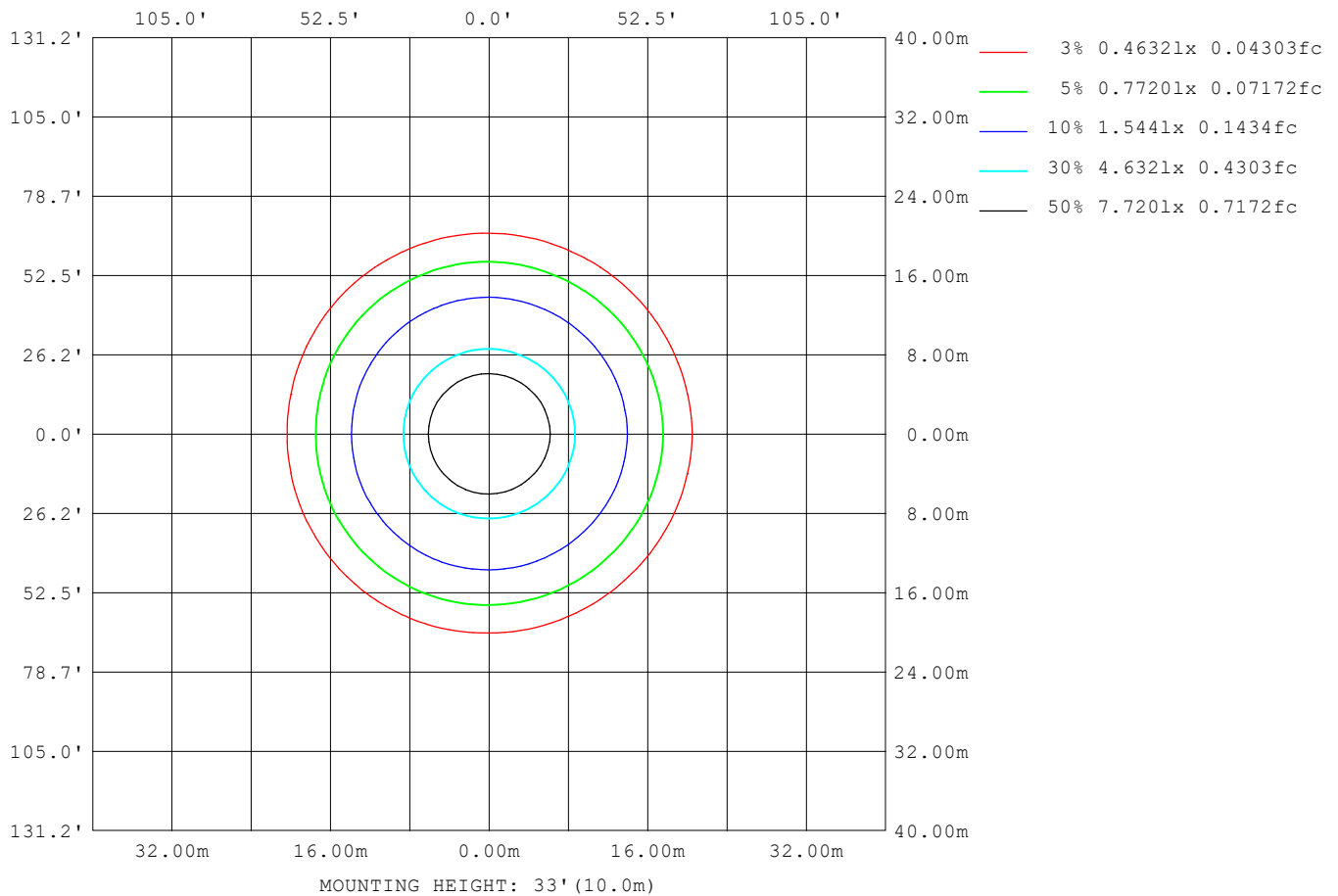
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G_INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K_LDI90	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:19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:239.9V I:0.1641A P:37.70W PF:0.9577 Lamp Flux:4174.13x1 lm		
NAME: MRS T-G INDIRECT_1160_SUS_WHT_OPAL_HE_500mA_4000K:LM190		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

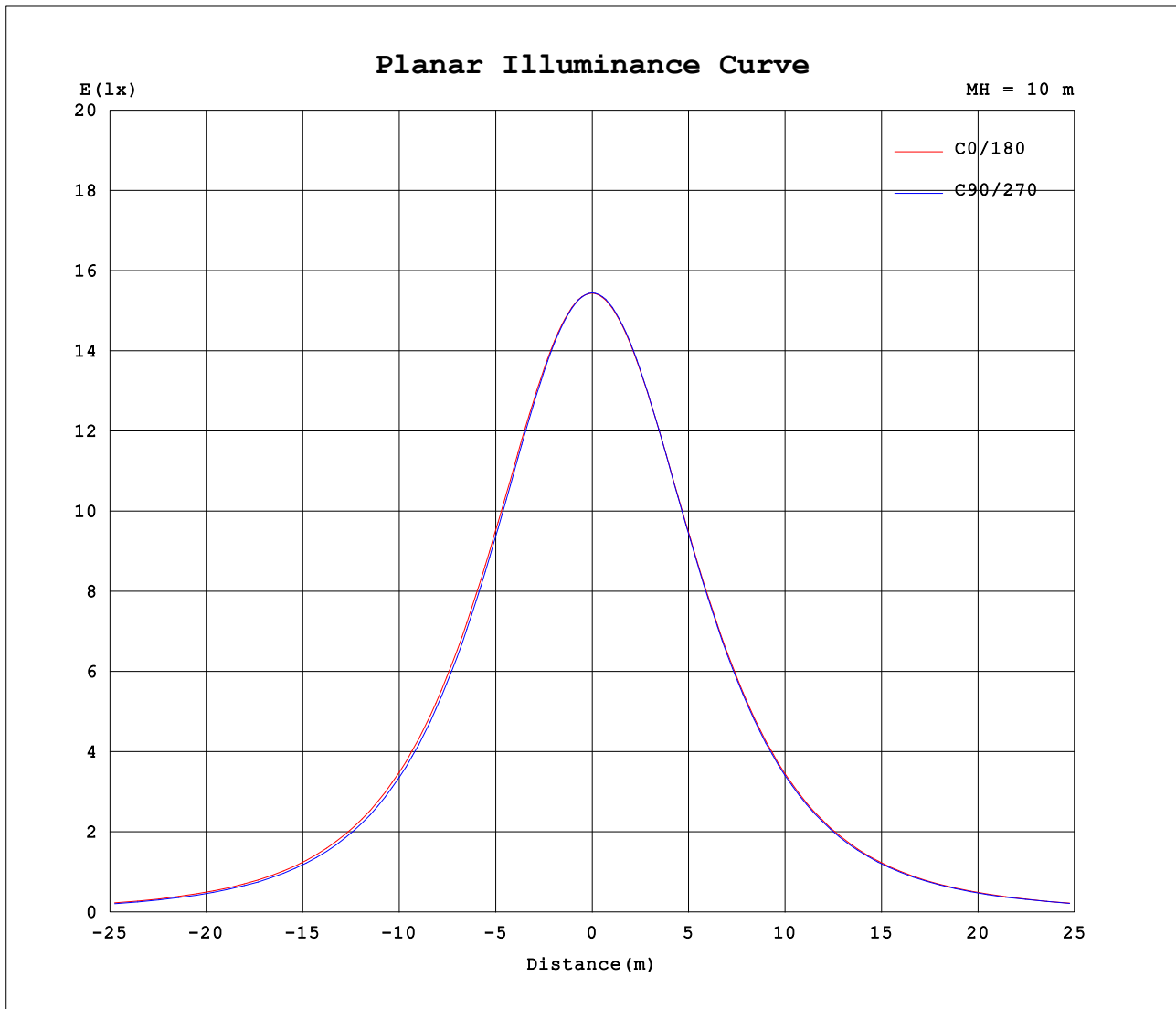
AvgL	cd/m2
L_0~180 (65) av	26242
L_0~180 (75) av	22409
L_0~180 (85) av	14029
L_90~270 (65) av	25032
L_90~270 (75) av	21253
L_90~270 (85) av	10565
L_45 (65) av	25561
L_45 (75) av	21830
L_45 (85) av	13352

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:JEFF
Test Date:19 March 2025

γ Range: 0 - 90DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:7.891m [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: 19 March 2025

γ Range: 0 - 90DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 7.891m [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:7.891m [K=1.0000]
Remarks:

```