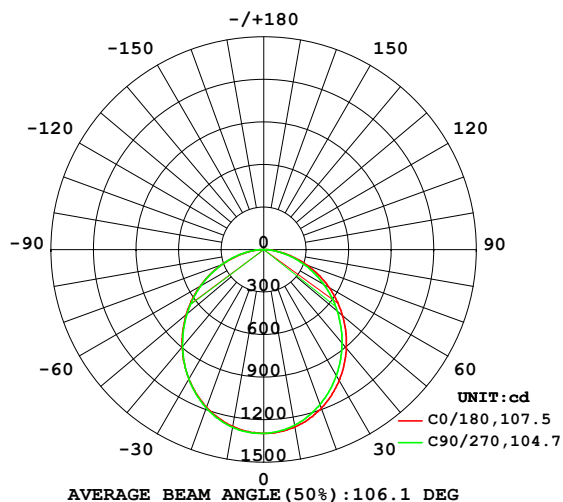


## LUMINAIRE PHOTOMETRIC TEST REPORT

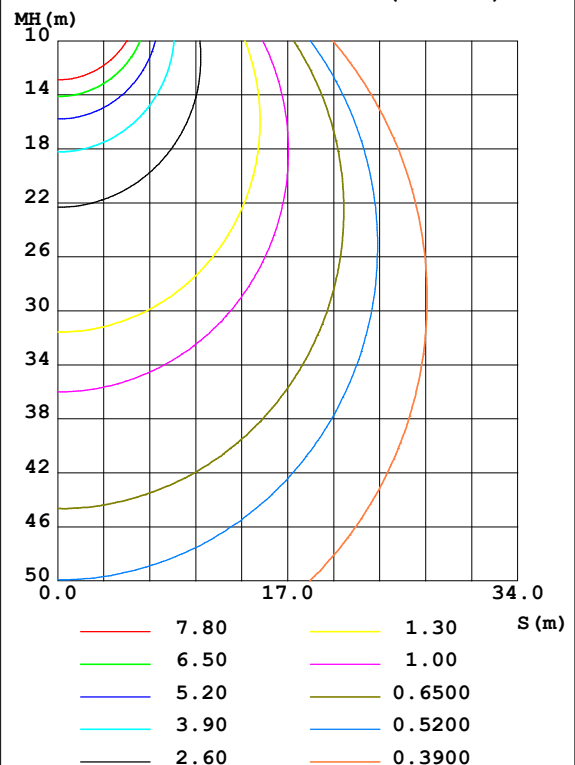
Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED		WEIGHT:
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 100.97 lm/W			
LLE 20000mm	1250lm 940 HV ADV5	Imax(cd)	1298	S/MH(C0/180)	1.22
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.22
RATED VOLTAGE(V)		TOTAL FLUX(lm)	3458.2	$\eta$ UP,DN(C0-180)	0.0,49.4
NOMINAL FLUX(lm)		CIE CLASS	DIRECT	$\eta$ UP,DN(C180-360)	0.0,50.6
LAMPS INSIDE		$\eta$ up(%)	0.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)		$\eta$ 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: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [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
5	1290	1283	1284	1289	1288	1294	1292	1289	0- 5	30.91	30.91	0.89,0.89
10	1269	1255	1258	1267	1265	1277	1272	1267	5- 10	91.40	122.3	3.54,3.54
15	1237	1214	1215	1231	1231	1246	1237	1229	10- 15	148.1	270.4	7.82,7.82
20	1189	1161	1162	1182	1182	1201	1188	1179	15- 20	198.6	469.0	13.6,13.6
25	1133	1099	1098	1121	1124	1144	1127	1117	20- 25	241.3	710.3	20.5,20.5
30	1065	1025	1025	1052	1055	1076	1056	1047	25- 30	274.6	984.9	28.5,28.5
35	989.4	945.7	945.6	975.1	978.0	998.8	976.2	967.6	30- 35	297.7	1283	37.1,37.1
40	907.8	860.7	859.8	891.9	895.4	916.7	891.2	882.9	35- 40	310.3	1593	46.1,46.1
45	818.9	771.0	770.4	803.7	807.5	827.6	801.0	791.8	40- 45	312.3	1905	55.1,55.1
50	726.6	677.8	678.2	712.5	715.4	735.0	707.2	697.9	45- 50	304.0	2209	63.9,63.9
55	630.5	582.3	584.0	616.6	618.7	638.8	611.0	601.1	50- 55	286.1	2495	72.2,72.2
60	531.2	484.5	487.8	519.8	520.0	540.5	512.8	502.4	55- 60	259.3	2755	79.7,79.7
65	429.7	386.1	391.9	422.2	418.8	440.9	415.1	402.6	60- 65	224.9	2979	86.2,86.2
70	328.0	289.2	298.0	324.4	317.5	341.2	318.6	303.8	65- 70	184.2	3164	91.5,91.5
75	227.8	196.0	207.1	229.9	218.3	243.7	225.2	208.3	70- 75	139.3	3303	95.5,95.5
80	133.8	110.5	122.6	140.7	125.9	152.5	137.6	120.4	75- 80	93.12	3396	98.2,98.2
85	54.12	37.07	47.32	62.49	48.92	71.61	59.53	44.79	80- 85	49.20	3445	99.6,99.6
90	2.313	0.9969	0.9596	4.422	0.9091	8.605	2.813	0.8866	85- 90	12.99	3458	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 1905.2 lm

%lum = 55.1%

%lamp = 55.1%

Conical surface Flux(120deg): 2754.5 lm

%lum = 79.7%

%lamp = 79.7%

C Range: 0 - 360DEG

C Interval: 22.5DEG

Test Speed: MEDIUM

Temperature:25.3DEG

Operators:JEFF

Test Date:20 August 2024

 $\gamma$  Range: 0 - 90DEG $\gamma$  Interval: 0.5DEG

Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295

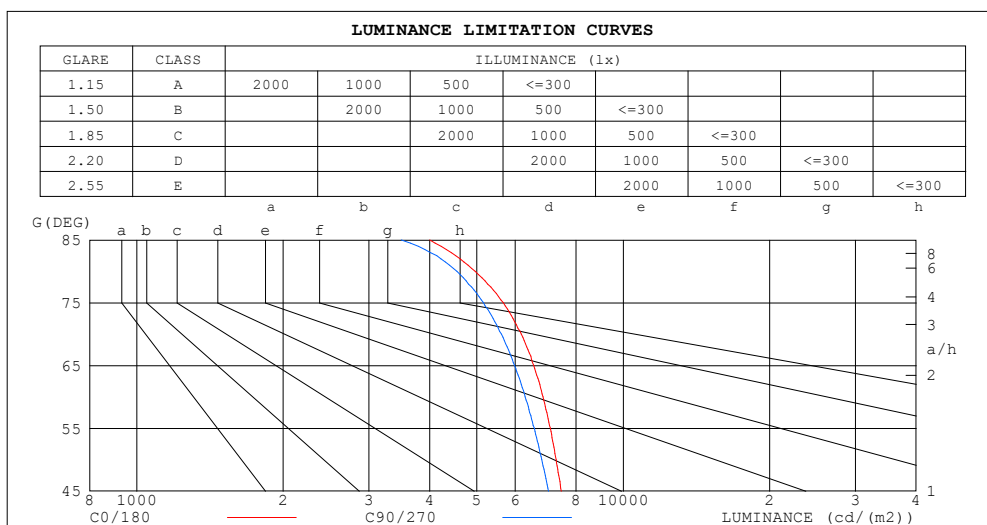
Humidity:65.0%

Test Distance:7.888m [K=1.0000]

Remarks:

## LUMINANCE LIMITATION CURVES

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K_CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



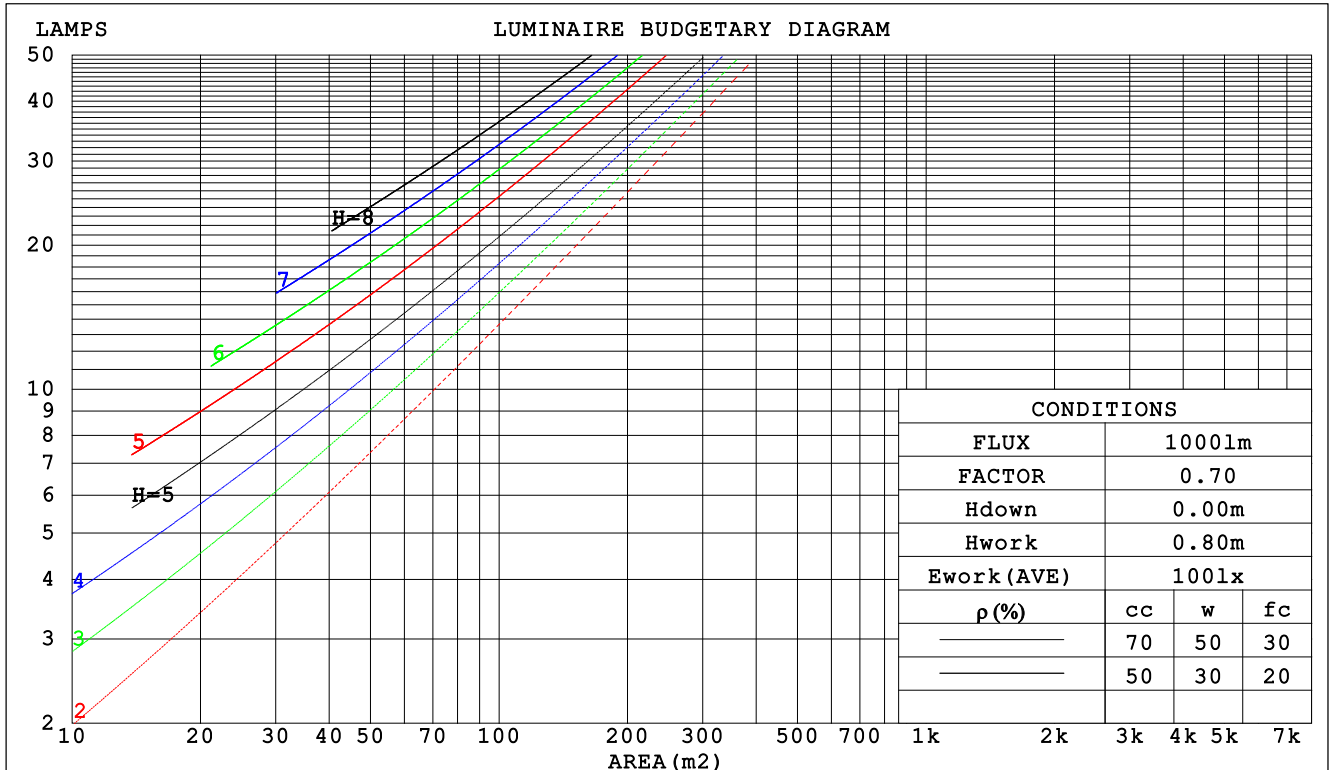
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 20 August 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.888m [K=1.0000]  
Remarks:

**CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM**

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED		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	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	1.04	.00	.96	1.02	.98	.94	.98	.94	.92	.94	.91	.89	.90	.88	.86	.84
2.0	.91	.84	.78	.89	.83	.77	.85	.80	.76	.82	.78	.74	.79	.76	.72	.70
3.0	.80	.72	.65	.78	.71	.65	.75	.69	.64	.73	.67	.62	.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	.41	.39
7.0	.52	.43	.37	.51	.43	.37	.50	.42	.37	.48	.41	.36	.47	.41	.36	.34
8.0	.47	.39	.33	.47	.39	.33	.45	.38	.33	.44	.37	.33	.43	.37	.32	.30
9.0	.44	.35	.30	.43	.35	.30	.42	.35	.30	.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: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

**WEC AND CCEC**

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED	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	.305	.173	.055	.298	.170	.054	.285	.163	.052	.273	.157	.050	.261	.151	.049		
2.0	.287	.158	.048	.281	.155	.048	.270	.150	.047	.259	.145	.045	.249	.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	.223	.115	.033	.215	.112	.033	.208	.110	.033	.201	.107	.032		
6.0	.211	.106	.030	.208	.105	.030	.200	.103	.030	.194	.101	.030	.187	.099	.029		
7.0	.197	.097	.028	.193	.096	.027	.187	.095	.027	.181	.093	.027	.175	.091	.027		
8.0	.184	.090	.025	.181	.089	.025	.175	.088	.025	.170	.086	.025	.165	.085	.025		
9.0	.173	.083	.023	.170	.083	.023	.165	.081	.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	.045	.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	.141	.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	.042	.023	.009	.014	.008	.003	
10.0	.117	.060	.023	.100	.052	.020	.070	.037	.014	.041	.022	.008	.013	.007	.003	

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

**UGR(Unified Glare Rating) Table**

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm										
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED								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	19.5	21.0	19.7	21.2	21.4	19.1	20.6	19.4	20.8	21.0
3H	21.0	22.3	21.3	22.6	22.8	20.5	21.9	20.8	22.2	22.4
4H	21.5	22.9	21.9	23.1	23.4	21.1	22.4	21.4	22.7	22.9
6H	21.9	23.2	22.3	23.5	23.7	21.5	22.7	21.8	23.0	23.3
8H	22.1	23.3	22.4	23.6	23.8	21.6	22.8	21.9	23.1	23.4
12H	22.1	23.3	22.5	23.6	23.9	21.7	22.8	22.0	23.1	23.4
4H 2H	20.0	21.3	20.3	21.5	21.8	19.7	21.0	20.0	21.3	21.5
3H	21.6	22.8	22.0	23.1	23.4	21.3	22.4	21.6	22.7	23.0
4H	22.3	23.4	22.7	23.7	24.0	22.0	23.0	22.3	23.3	23.7
6H	22.9	23.8	23.2	24.1	24.5	22.5	23.4	22.9	23.8	24.1
8H	23.0	23.9	23.4	24.3	24.6	22.6	23.5	23.0	23.9	24.3
12H	23.1	23.9	23.6	24.3	24.7	22.7	23.5	23.1	23.9	24.3
8H 4H	22.5	23.4	22.9	23.8	24.1	22.2	23.1	22.6	23.4	23.8
6H	23.2	23.9	23.6	24.3	24.7	22.8	23.5	23.3	23.9	24.4
8H	23.4	24.0	23.9	24.5	24.9	23.0	23.7	23.5	24.1	24.6
12H	23.6	24.1	24.0	24.6	25.0	23.2	23.7	23.7	24.2	24.7
12H 4H	22.5	23.3	22.9	23.7	24.1	22.2	23.0	22.6	23.4	23.8
6H	23.2	23.8	23.7	24.3	24.7	22.9	23.5	23.3	23.9	24.4
8H	23.5	24.0	23.9	24.5	24.9	23.1	23.7	23.6	24.1	24.6
Variations with the observer position at spacings:										
S = 1.0H	+ 0.2 / - 0.2					+ 0.2 / - 0.2				
1.5H	+ 0.1 / - 0.2					+ 0.1 / - 0.3				
2.0H	+ 0.3 / - 0.3					+ 0.2 / - 0.2				

CIE Pub.117 Corrected 3458 lm Total Lamp Luminous Flux. (8log(F/F0) = 4.3)

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

**UTILIZATION FACTORS TABLE**

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

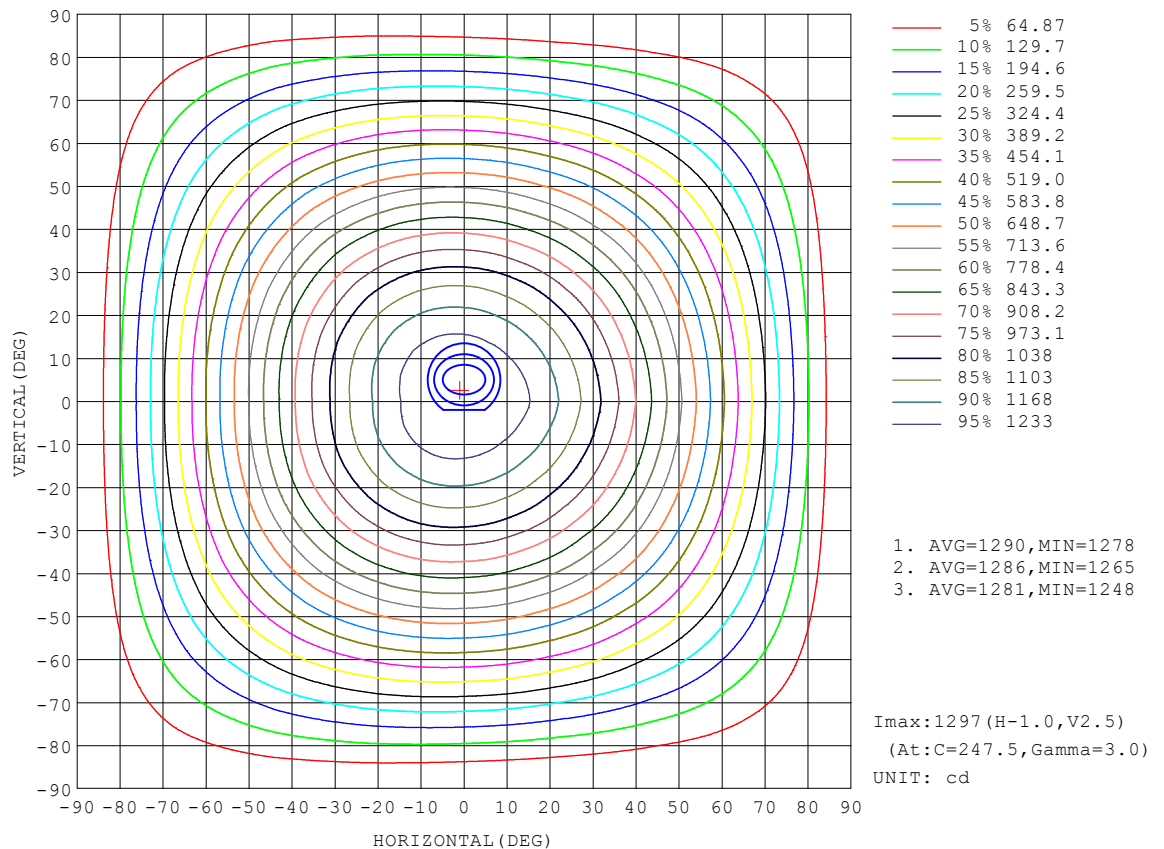
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	47	40	58	47	40	56	46	40	33
0.80	68	57	50	67	56	49	66	56	49	42
1.00	77	66	59	76	65	58	73	67	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	106	101	96	104	99	95	100	96	92	83
5.00	109	104	100	106	102	99	102	99	95	86
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: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

# ISOCANDELA DIAGRAM

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



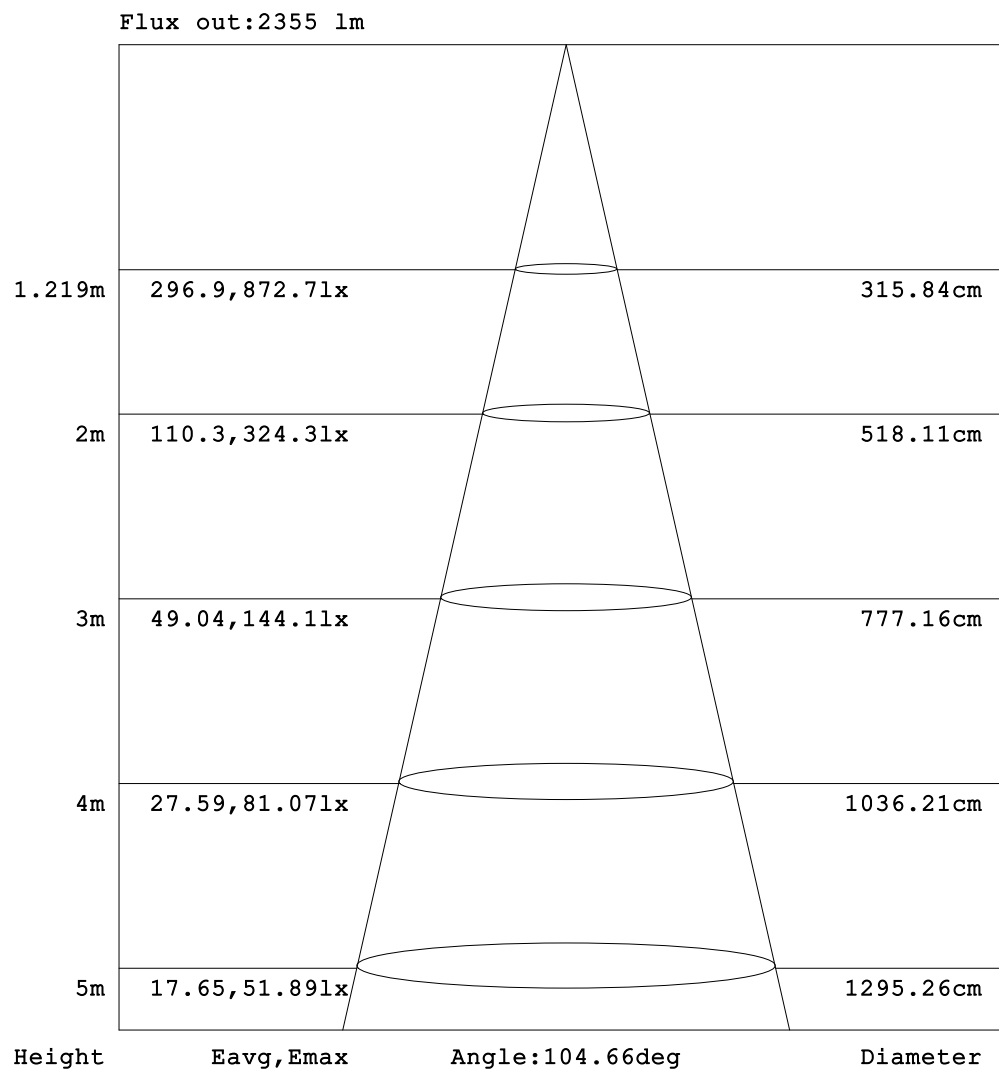
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:



**AAI Figure**

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



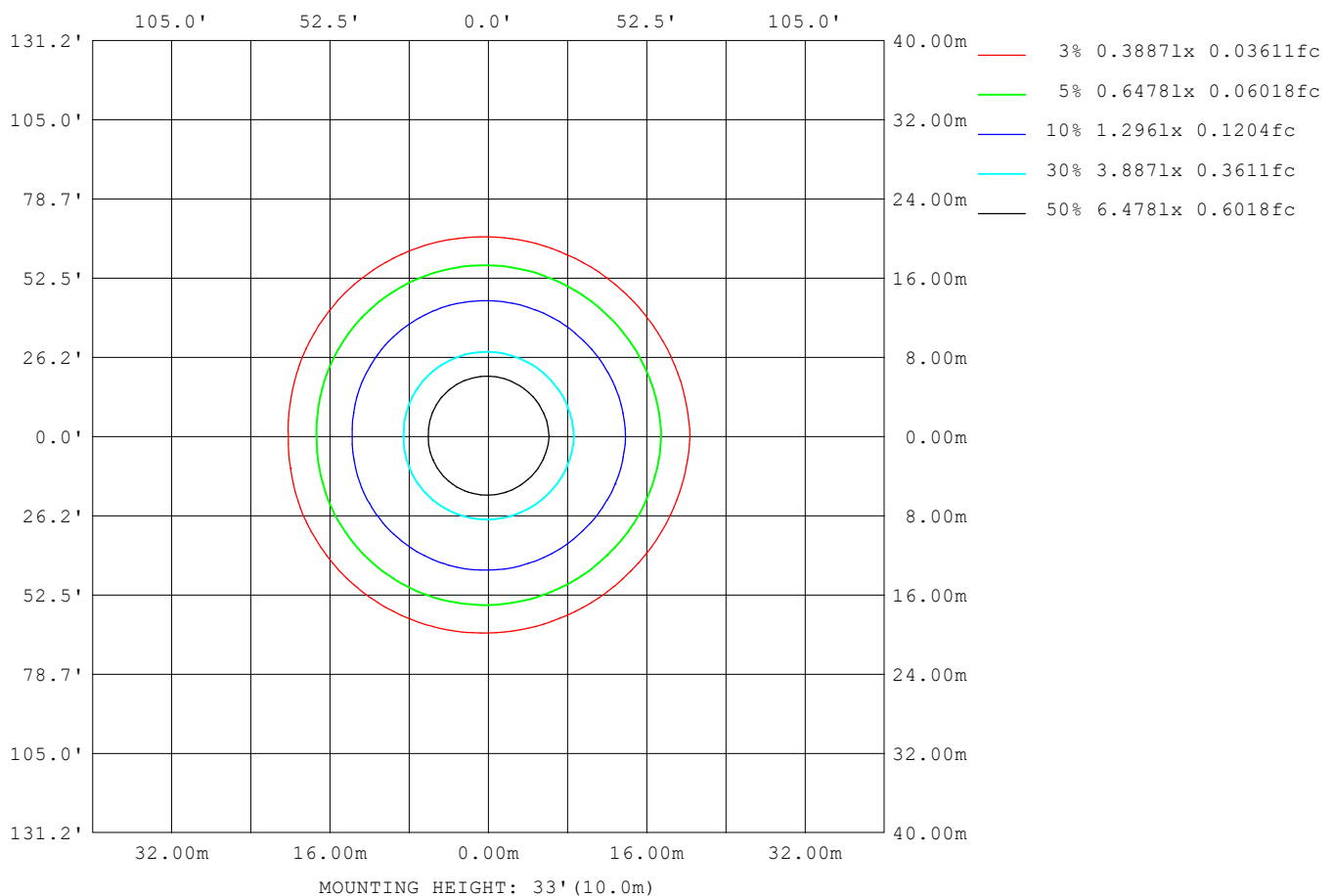
**Note:**The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

**ISOLUX DIAGRAM**

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

### LED Avg.L Report

Test:U:240.1V I:0.1510A P:34.25W PF:0.9448 Lamp Flux:3458.21x1 lm		
NAME: LAB_DR_1570_REC_WHT_OPAL_HO_400mA_4000K CRI90TYPE:LED	WEIGHT:	
SPEC.:	DIM.:	SERIAL No.:1
MFR.: DARKON	SUR.:	Shielding Angle:

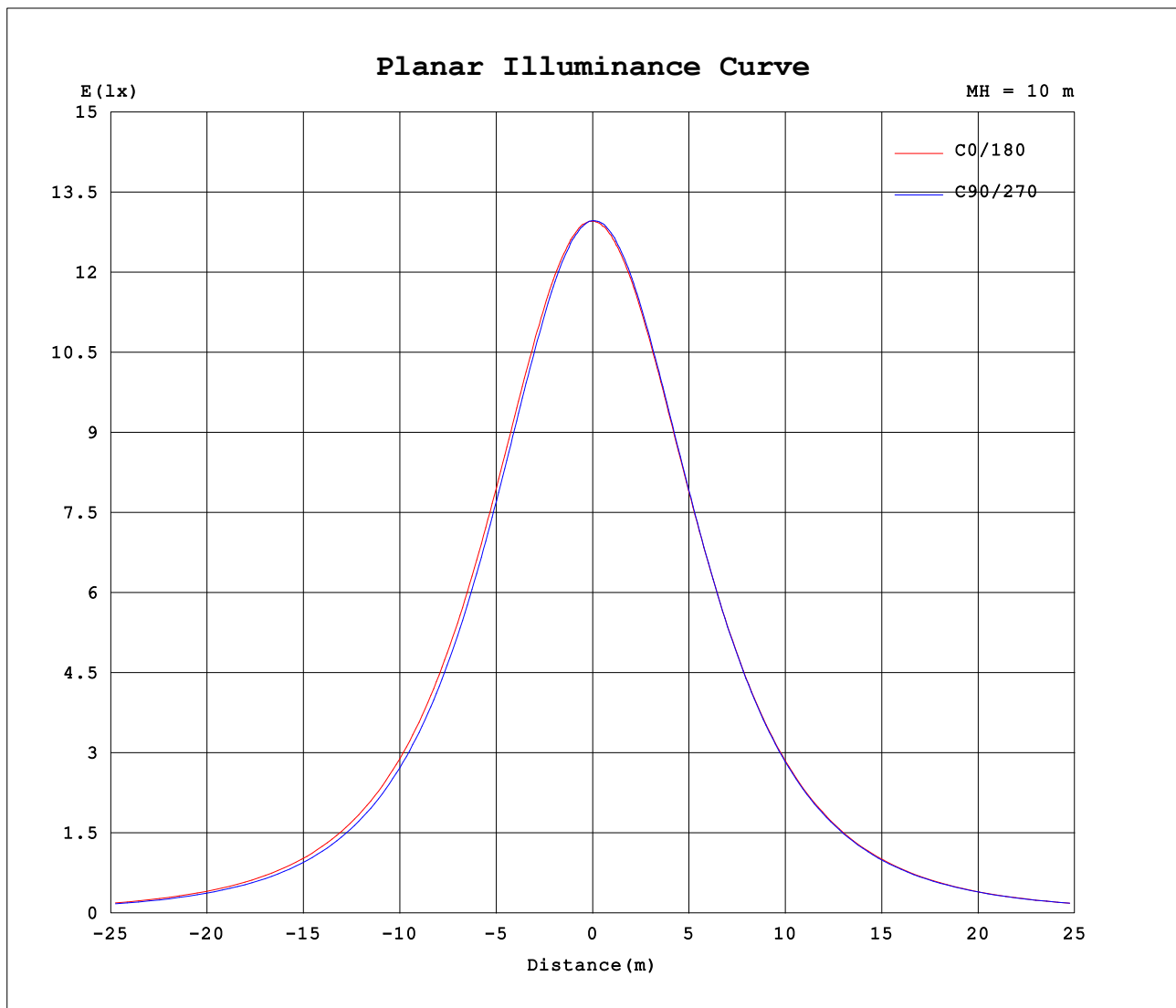
AvgL	cd/m2
L_0~180 (65) av	6468
L_0~180 (75) av	5552
L_0~180 (85) av	3809
L_90~270 (65) av	6152
L_90~270 (75) av	5380
L_90~270 (85) av	3950
L_45 (65) av	6296
L_45 (75) av	5464
L_45 (85) av	3992

Standard: GB/T 29293-2012

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature:25.3DEG  
Operators:JEFF  
Test Date:20 August 2024

γ Range: 0 - 90DEG  
γ Interval: 0.5DEG  
Test System:EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity:65.0%  
Test Distance:7.888m [K=1.0000]  
Remarks:

### Planar Illuminance Curve



C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: MEDIUM  
Temperature: 25.3DEG  
Operators: JEFF  
Test Date: 20 August 2024

$\gamma$  Range: 0 - 90DEG  
 $\gamma$  Interval: 0.5DEG  
Test System: EVERFINE GO-2000A\_V1 SYSTEM V2.0.295  
Humidity: 65.0%  
Test Distance: 7.888m [K=1.0000]  
Remarks:

