

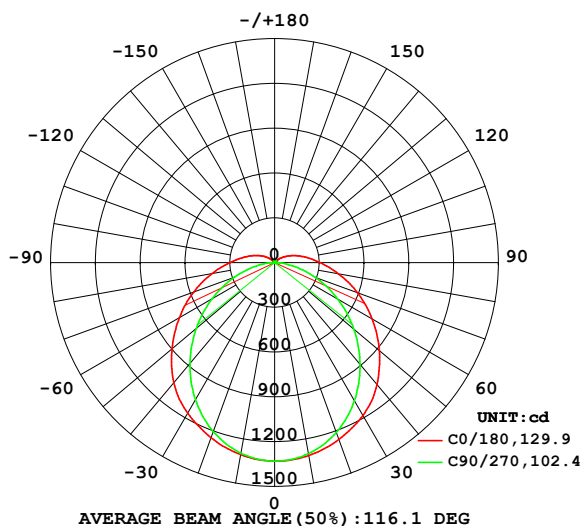


LUMINAIRE PHOTOMETRIC TEST REPORT

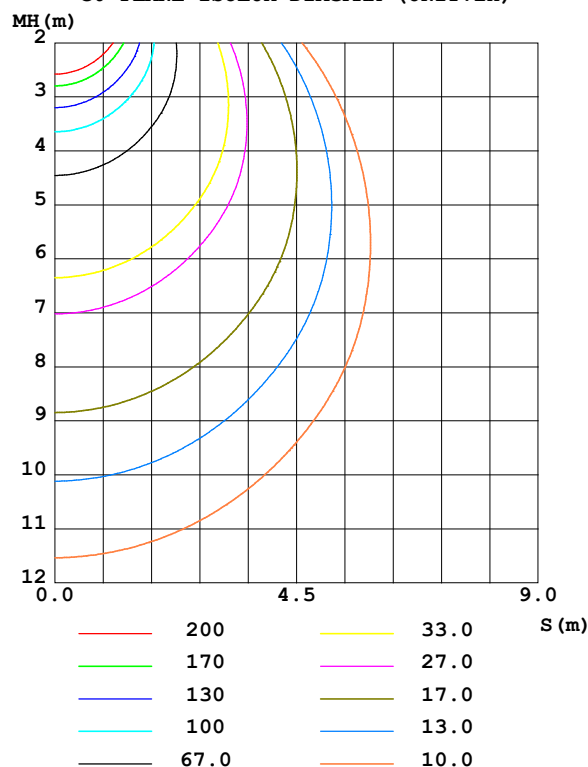
Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 160.00 lm/W			
MODEL		I _{max} (cd)	1330	S/MH(C0/180)	1.33
NOMINAL POWER(W)		LOR(%)	100.0	S/MH(C90/270)	1.20
RATED VOLTAGE(V)		TOTAL FLUX(lm)	4480.0	η UP,DN(C0-180)	4.0,45.7
NOMINAL FLUX(lm)	4480	CIE CLASS	DIRECT	η UP,DN(C180-360)	4.0,46.3
LAMPS INSIDE	1	η up (%)	8.0	CIBSE SHR NOM	1.25
TEST VOLTAGE(V)	230	η down (%)	92.0	CIBSE SHR MAX	1.35

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:Testing Room
Test Date:2025-11-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Humidity:65.0%
Test Distance:11.050m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C90	C180	C270					γ	Φ zone	Φ total	%lum, lamp
10	1307	1297	1313	1300					0- 10	125.7	125.7	2.81,2.81
20	1248	1204	1260	1210					10- 20	359.2	484.9	10.8,10.8
30	1165	1061	1184	1069					20- 30	543.5	1028	23,23
40	1051	882.9	1067	891.3					30- 40	657.6	1686	37.6,37.6
50	898.2	685.2	915.7	693.4					40- 50	684.8	2371	52.9,52.9
60	736.3	482.2	754.1	489.2					50- 60	632.7	3004	67,67
70	576.8	285.9	591.3	289.8					60- 70	520.2	3524	78.7,78.7
80	426.1	110.9	434.4	112.0					70- 80	371.0	3895	86.9,86.9
90	300.1	12.31	305.4	13.04					80- 90	225.5	4120	92,92
100	210.6	7.578	211.9	7.536					90-100	145.0	4265	95.2,95.2
110	141.6	5.405	139.5	5.113					100-110	95.32	4361	97.3,97.3
120	86.14	6.666	82.77	5.990					110-120	58.36	4419	98.6,98.6
130	42.26	8.052	38.16	7.257					120-130	30.91	4450	99.3,99.3
140	14.29	9.309	13.86	8.549					130-140	12.77	4463	99.6,99.6
150	13.25	10.47	12.97	9.859					140-150	7.255	4470	99.8,99.8
160	12.68	11.39	12.50	11.11					150-160	5.451	4475	99.9,99.9
170	12.35	12.16	11.94	11.98					160-170	3.408	4479	100,100
180	12.25	12.57	12.26	12.57					170-180	1.165	4480	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 2030.4 lm

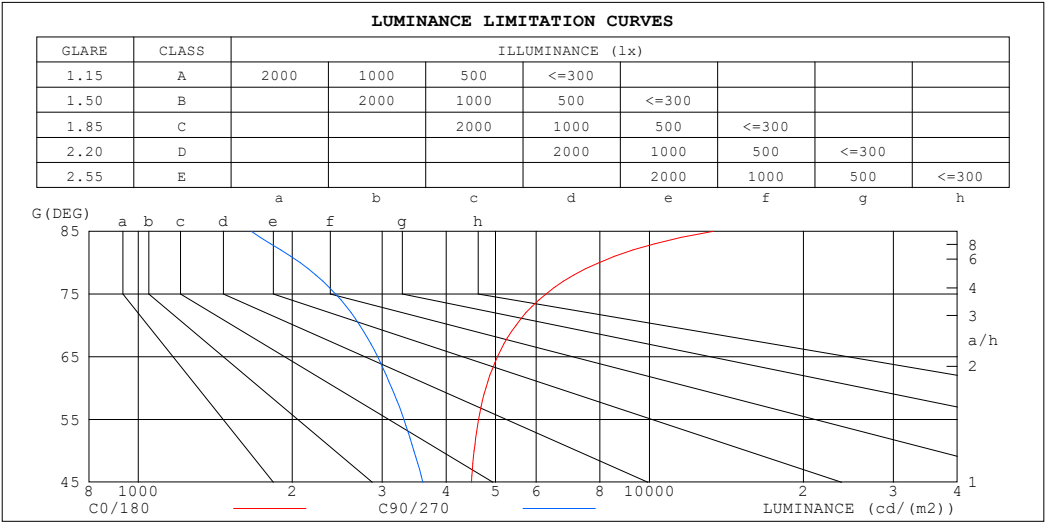
%lum = 45.3%
%lamp = 45.3%

Conical surface Flux(120deg): 3003.6 lm

%lum = 67.0%
%lamp = 67.0%

LUMINANCE LIMITATION CURVES

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



LUMINANCE cd/(m2)		
G (DEG)	C0/180	C90/270
85	13345	1663
80	7970	2072
75	6273	2428
70	5478	2713
65	5044	2938
60	4783	3130
55	4628	3306
50	4539	3460
45	4487	3605

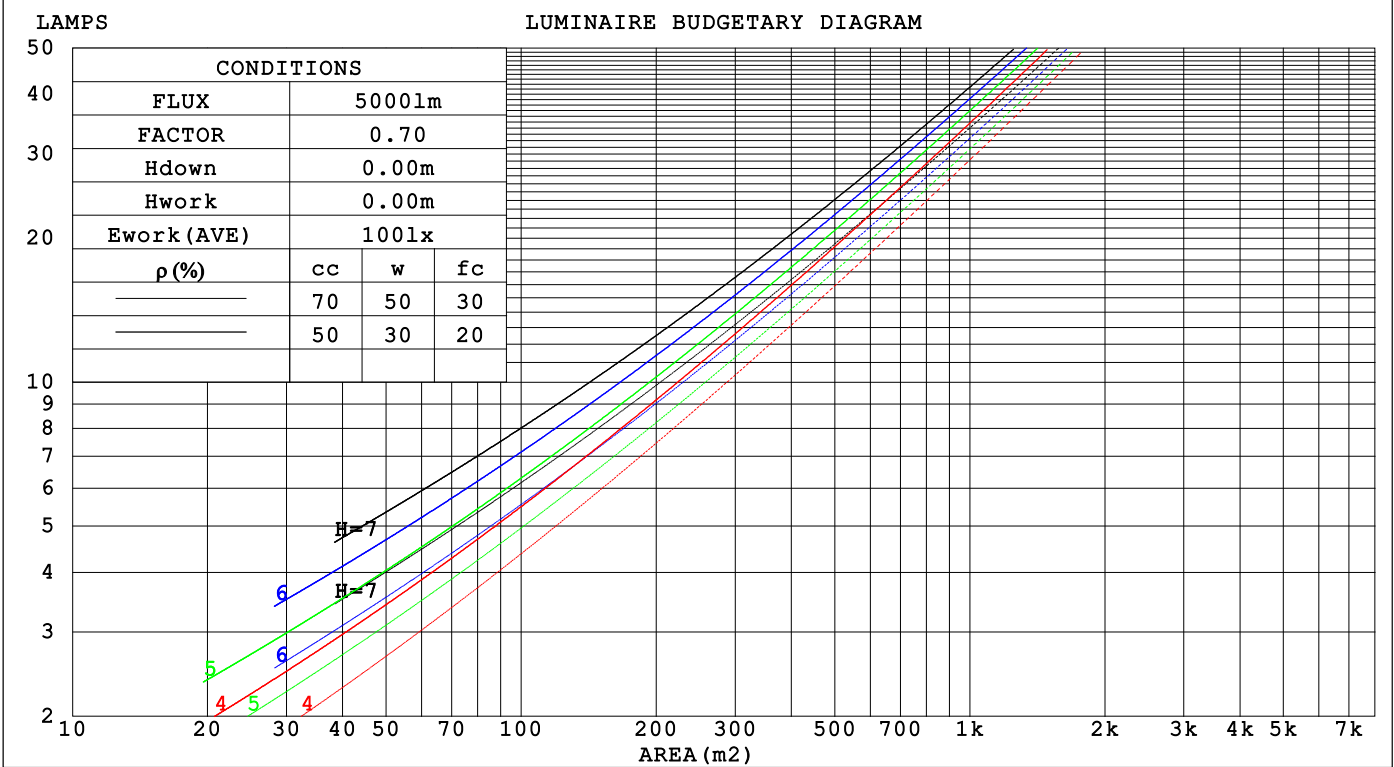
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:Testing Room
Test Date:2025-11-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Humidity:65.0%
Test Distance:11.050m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz		
Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

pcc	80%			70%			50%			30%			10%			0
p _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
p _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio Coefficients of Utilization(CU)															
0.0	1.17	1.17	1.17	1.13	1.13	1.13	1.07	1.07	1.07	1.00	1.00	1.00	.95	.95	.95	.92
1.0	.00	.95	.91	.97	.92	.88	.91	.87	.84	.86	.83	.80	.81	.78	.76	.74
2.0	.86	.79	.73	.84	.77	.71	.79	.73	.68	.74	.70	.66	.70	.66	.63	.60
3.0	.75	.67	.60	.73	.65	.59	.69	.62	.57	.65	.59	.55	.62	.57	.53	.50
4.0	.67	.57	.50	.65	.56	.50	.61	.54	.48	.58	.52	.47	.55	.49	.45	.43
5.0	.59	.50	.43	.58	.49	.43	.55	.47	.41	.52	.45	.40	.49	.44	.39	.37
6.0	.53	.44	.38	.52	.43	.37	.49	.42	.36	.47	.40	.35	.44	.39	.34	.32
7.0	.48	.39	.33	.47	.39	.33	.45	.37	.32	.43	.36	.31	.41	.35	.30	.28
8.0	.44	.35	.29	.43	.35	.29	.41	.34	.28	.39	.33	.28	.37	.31	.27	.25
9.0	.40	.32	.26	.39	.31	.26	.38	.31	.26	.36	.30	.25	.34	.29	.24	.22
10.0	.37	.29	.24	.36	.29	.24	.35	.28	.23	.33	.27	.23	.32	.26	.22	.20



C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:Testing Room

Test Date:2025-11-20

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471

Humidity:65.0%

Test Distance:11.050m [K=1.0000]

Remarks:

WEC AND CCEC

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	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	.350	.199	.063	.340	.194	.062	.322	.185	.059	.306	.176	.057	.290	.168	.054		
2.0	.313	.172	.053	.305	.168	.052	.288	.160	.050	.274	.153	.048	.260	.147	.046		
3.0	.283	.151	.045	.275	.147	.044	.261	.141	.043	.248	.136	.042	.235	.130	.040		
4.0	.258	.134	.039	.251	.131	.039	.238	.126	.038	.226	.121	.037	.215	.117	.036		
5.0	.236	.120	.035	.230	.118	.034	.218	.114	.033	.207	.109	.033	.197	.105	.032		
6.0	.218	.109	.031	.212	.107	.031	.201	.103	.030	.192	.100	.029	.182	.096	.029		
7.0	.201	.100	.028	.196	.098	.028	.187	.095	.027	.178	.091	.027	.170	.088	.026		
8.0	.188	.092	.026	.183	.090	.025	.174	.087	.025	.166	.084	.024	.158	.081	.024		
9.0	.175	.085	.024	.171	.083	.023	.163	.081	.023	.156	.078	.022	.149	.076	.022		
10.0	.164	.079	.022	.161	.078	.022	.153	.075	.021	.147	.073	.021	.140	.070	.020		

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	.252	.252	.252	.215	.215	.215	.147	.147	.147	.084	.084	.084	.027	.027	.027	
1.0	.245	.217	.193	.209	.187	.166	.143	.128	.115	.082	.074	.067	.026	.024	.022	
2.0	.237	.194	.158	.203	.167	.136	.139	.115	.095	.080	.067	.056	.026	.022	.018	
3.0	.229	.177	.135	.197	.153	.117	.135	.106	.082	.078	.062	.048	.025	.020	.016	
4.0	.222	.164	.120	.190	.142	.104	.131	.099	.073	.076	.058	.043	.024	.019	.014	
5.0	.214	.154	.109	.184	.133	.095	.127	.093	.067	.073	.055	.040	.024	.018	.013	
6.0	.207	.146	.102	.178	.126	.089	.123	.088	.063	.071	.052	.037	.023	.017	.012	
7.0	.200	.139	.096	.172	.120	.084	.119	.084	.059	.069	.050	.035	.022	.016	.012	
8.0	.193	.133	.092	.166	.115	.080	.115	.081	.057	.067	.048	.034	.022	.016	.011	
9.0	.187	.128	.089	.161	.111	.077	.112	.078	.055	.065	.046	.033	.021	.015	.011	
10.0	.181	.124	.086	.156	.108	.075	.108	.076	.053	.063	.045	.032	.020	.015	.011	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:Testing Room
Test Date:2025-11-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Humidity:65.0%
Test Distance:11.050m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm										
NAME: 0028920277 3000K 28W 4480lm					TYPE:			WEIGHT:		
SPEC.:					DIM.:			SERIAL No.:		
MFR.:					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	17.8	19.2	18.2	19.6	19.9	16.3	17.8	16.7	18.1	18.5
3H	20.0	21.3	20.4	21.7	22.1	17.7	19.0	18.1	19.4	19.8
4H	21.1	22.4	21.6	22.8	23.2	18.2	19.5	18.6	19.9	20.3
6H	22.4	23.6	22.8	24.0	24.5	18.6	19.8	19.0	20.2	20.6
8H	23.1	24.2	23.5	24.7	25.1	18.7	19.8	19.1	20.3	20.7
12H	23.9	25.0	24.3	25.4	25.9	18.7	19.8	19.2	20.3	20.8
4H 2H	18.3	19.6	18.7	20.0	20.4	17.2	18.4	17.6	18.8	19.3
3H	20.7	21.8	21.1	22.2	22.7	18.8	19.9	19.3	20.3	20.8
4H	22.0	23.0	22.5	23.5	24.0	19.5	20.5	20.0	21.0	21.5
6H	23.5	24.4	24.0	24.9	25.4	20.0	20.9	20.5	21.4	22.0
8H	24.3	25.1	24.8	25.6	26.2	20.2	21.0	20.7	21.6	22.1
12H	25.2	26.0	25.7	26.5	27.1	20.3	21.1	20.8	21.6	22.2
8H 4H	22.3	23.1	22.8	23.6	24.2	20.1	21.0	20.7	21.5	22.1
6H	23.9	24.7	24.5	25.2	25.8	20.9	21.6	21.5	22.2	22.8
8H	24.9	25.6	25.5	26.1	26.7	21.3	21.9	21.8	22.5	23.1
12H	26.1	26.6	26.7	27.2	27.9	21.5	22.1	22.1	22.7	23.3
12H 4H	22.3	23.0	22.8	23.6	24.2	20.3	21.1	20.8	21.6	22.2
6H	24.0	24.7	24.6	25.2	25.8	21.2	21.9	21.8	22.4	23.1
8H	25.1	25.6	25.7	26.2	26.9	21.7	22.2	22.3	22.8	23.5
Variations with the observer position at spacings(CIE Pub.117):										
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3				
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.4				

CIE Pub.117, 4480 lm Total Lamp Luminous Flux Corrected ($8\log(F/F_0) = 5.2$)
Area: 0.308 m²

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:Testing Room

Test Date:2025-11-20

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471

Humidity:65.0%

Test Distance:11.050m [K=1.0000]

Remarks:

UTILIZATION FACTORS TABLE

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

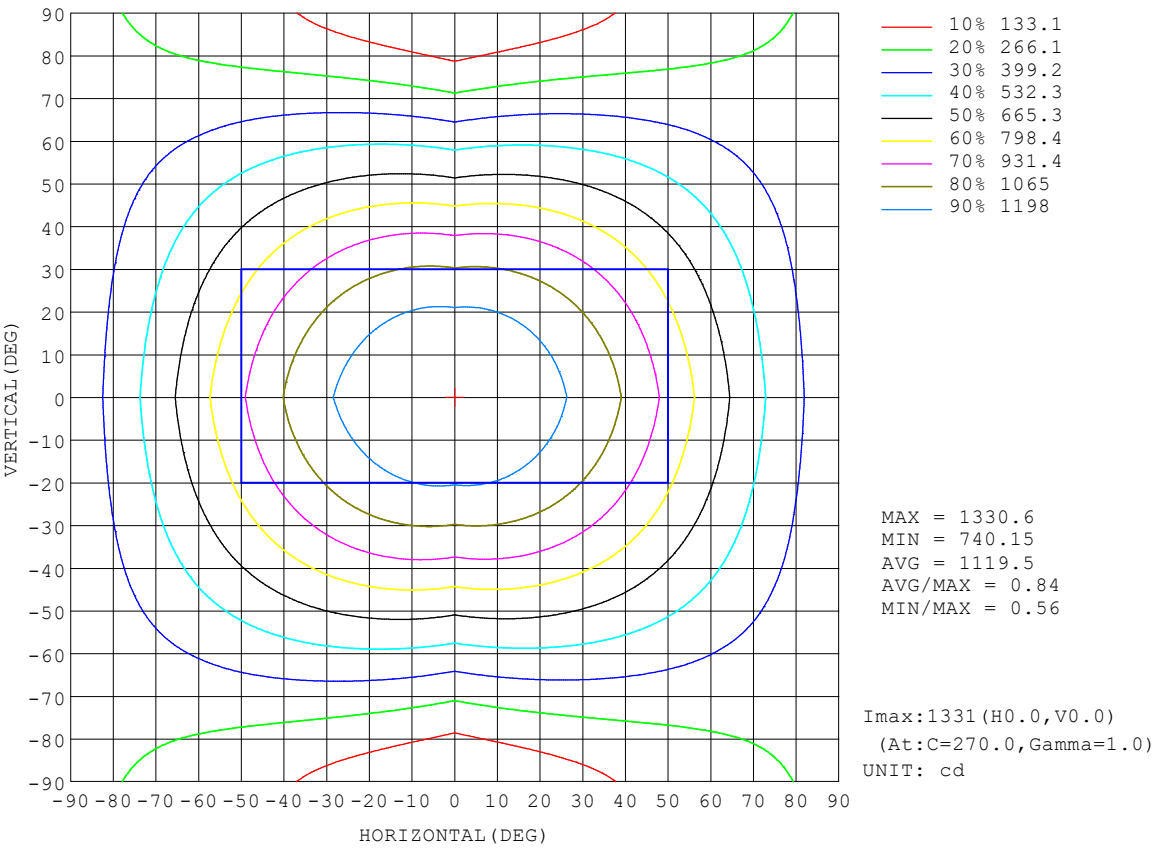
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	58	45	37	57	44	36	53	42	35	27
0.80	68	55	46	66	54	46	61	51	44	35
1.00	76	64	55	73	62	54	68	59	52	42
1.25	82	71	63	80	69	61	74	66	59	48
1.50	87	76	68	84	74	67	78	70	64	53
2.00	93	84	77	90	82	75	84	78	72	60
2.50	97	89	82	94	86	80	88	82	76	64
3.00	100	93	87	97	90	85	90	85	81	68
4.00	104	98	93	100	95	90	94	90	86	73
5.00	106	101	97	103	98	94	96	93	89	76
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Ceiling Mounted					SHRNOM = 1.25		

C Range: 0 - 360DEG
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 Operators: Testing Room
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γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
 Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.471
 Humidity: 65.0%
 Test Distance: 11.050m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

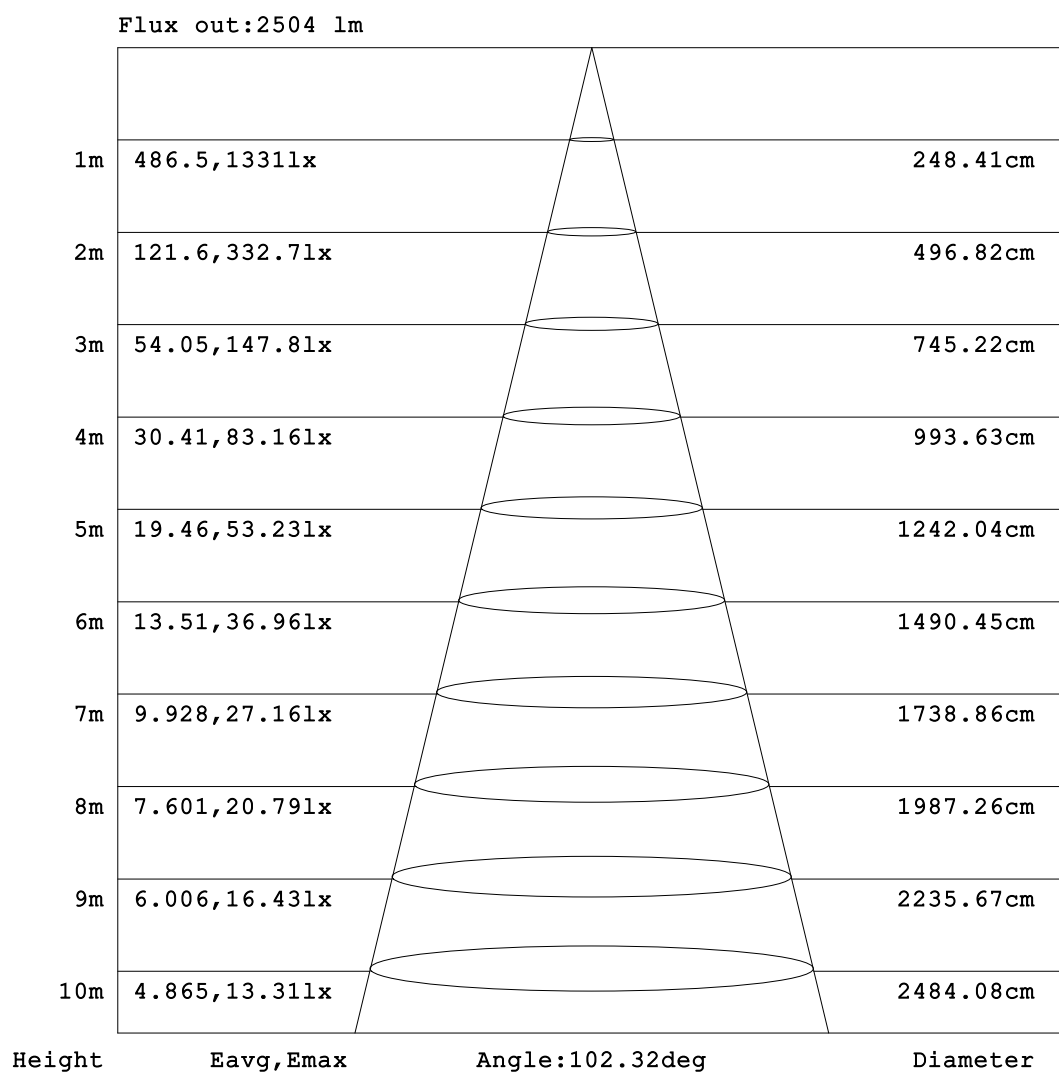
Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
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MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG C Interval: 90.0DEG Test Speed: HIGH Temperature:25.3℃ Operators:Testing Room Test Date:2025-11-20	γ Range: 0 - 180DEG γ Interval: 1.0DEG Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471 Humidity:65.0% Test Distance:11.050m [K=1.0000] Remarks:
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AAI Figure

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
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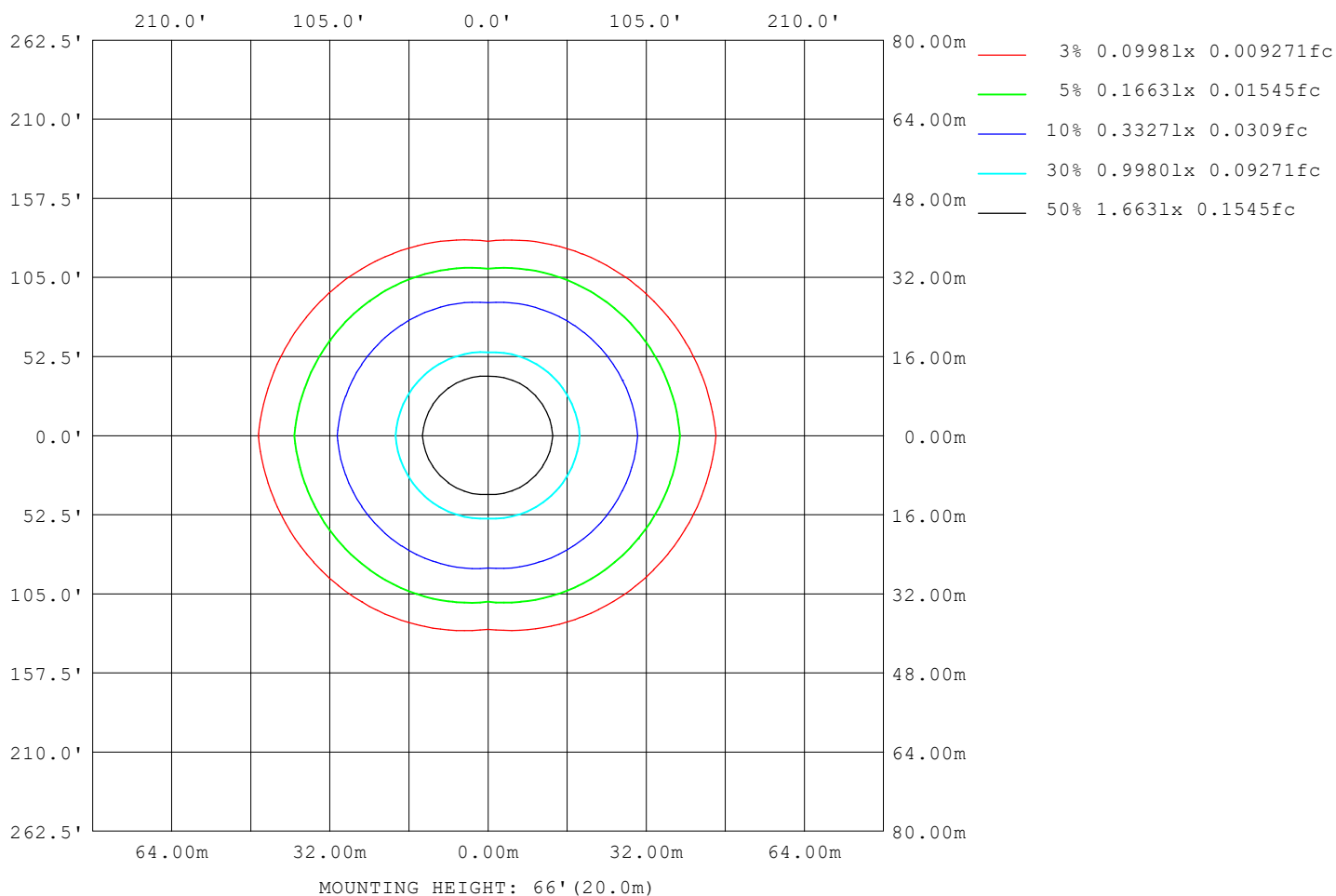
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3℃
Operators:Testing Room
Test Date:2025-11-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Humidity:65.0%
Test Distance:11.050m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3°C
Operators:Testing Room
Test Date:2025-11-20

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Humidity:65.0%
Test Distance:11.050m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
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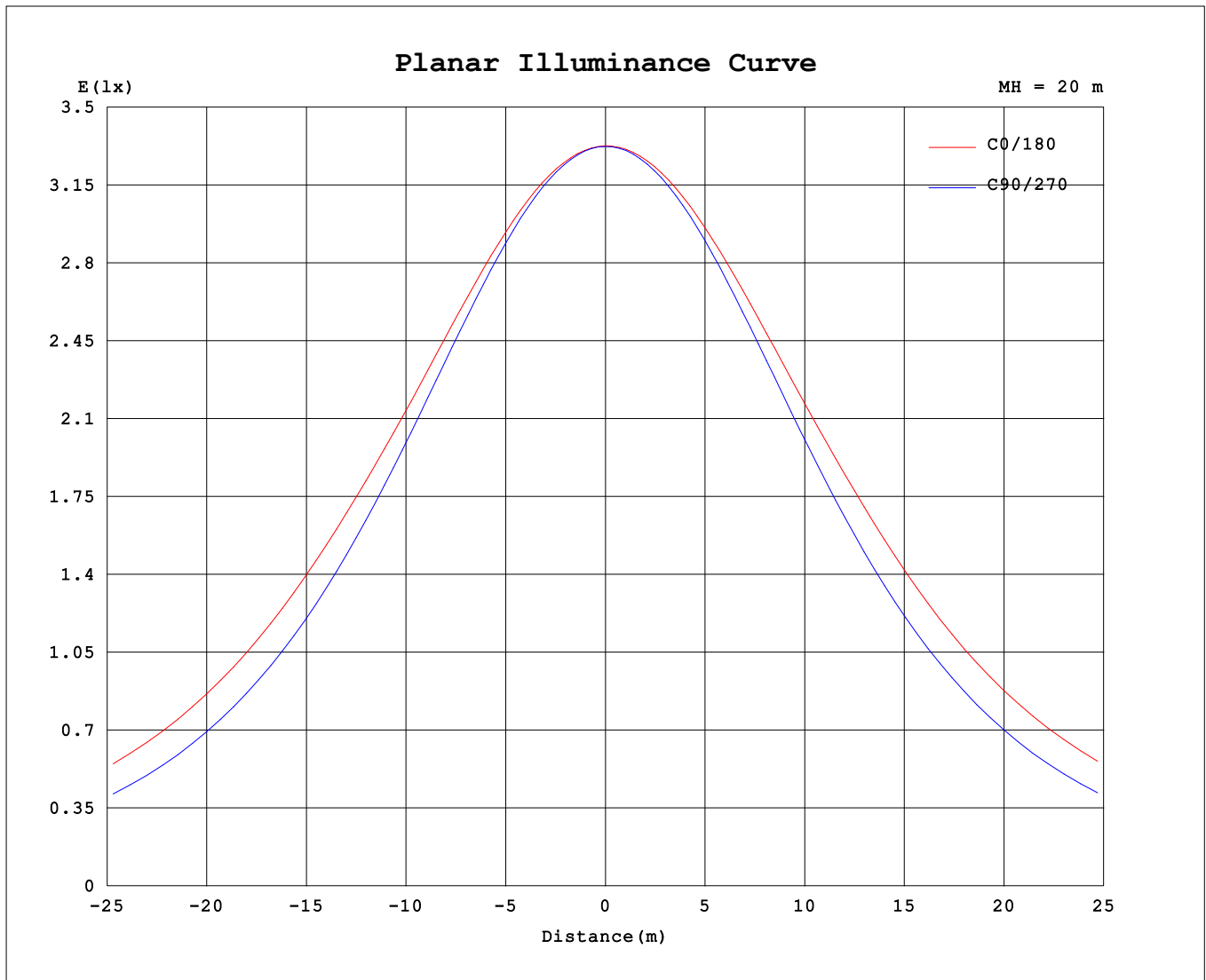
AvgL	cd/m2
L_0~180 (65) av	5105
L_0~180 (75) av	6341
L_0~180 (85) av	13449
L_90~270 (65) av	2960
L_90~270 (75) av	2446
L_90~270 (85) av	1673
L_45 (65) av	3769
L_45 (75) av	3911
L_45 (85) av	6098

Standard: GB/T 29293-2012

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γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Humidity:65.0%
Test Distance:11.050m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3°C
Operators: Testing Room
Test Date: 2025-11-20

γ Range: 0 - 180DEG
 γ Interval: 1.0DEG
Test System: EVERFINE GO-2000H_V1 SYSTEM V2.00.471
Humidity: 65.0%
Test Distance: 11.050m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:230.00V I:0.1258A P:28.000W PF:0.9668 Freq:49.98Hz Lamp Flux:4480x1 lm		
NAME: 0028920277 3000K 28W 4480lm	TYPE:	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.:	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	90	180	270														
0	1330	1330	1330	1330														
5	1323	1321	1326	1323														
10	1307	1297	1313	1300														
15	1281	1258	1290	1263														
20	1248	1204	1260	1210														
25	1208	1138	1224	1145														
30	1165	1061	1184	1069														
35	1115	975	1132	984														
40	1051	883	1067	891														
45	977	785	993	794														
50	898	685	916	693														
55	817	584	835	591														
60	736	482	754	489														
65	656	383	673	388														
70	577	286	591	290														
75	500	194	511	196														
80	426	111	434	112														
85	358	44.7	364	45.1														
90	300	12.3	305	13.0														
95	253	9.73	256	10.4														
100	211	7.58	212	7.54														
105	174	4.94	174	5.08														
110	142	5.40	139	5.11														
115	113	6.01	110	5.44														
120	86.1	6.67	82.8	5.99														
125	62.9	7.37	59.0	6.62														
130	42.3	8.05	38.2	7.26														
135	25.0	8.70	21.3	7.90														
140	14.3	9.31	13.9	8.55														
145	13.6	9.90	13.4	9.20														
150	13.3	10.5	13.0	9.86														
155	12.9	11.0	12.7	10.5														
160	12.7	11.4	12.5	11.1														
165	12.5	11.7	12.3	11.6														
170	12.3	12.2	11.9	12.0														
175	12.2	12.4	11.9	12.3														
180	12.2	12.6	12.3	12.6														

C Range: 0 - 360DEG

C Interval: 90.0DEG

Test Speed: HIGH

Temperature:25.3℃

Operators:Testing Room

Test Date:2025-11-20

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-2000H_V1 SYSTEM V2.00.471

Humidity:65.0%

Test Distance:11.050m [K=1.0000]

Remarks: